DOCUMENT RESUME

ED 348 626 CG 024 444

AUTHOR Feller, Richard W.; And Others
TITLE Counselor Role and Educational Change: Planning, Integration, and Basic Skills. Review of Literature.
INSTITUTION Colorado State Univ., Ft. Collins. School of Occupational and Educational Studies.
SPONS AGENCY Office of Vocational and Adult Education (ED), Washington, DC.
PUB DATE 92
CONTRACT VN90003001
NOTE 77p.; For other documents in this series, see CG 024 445-450.
PUB TYPE Information Analyses (070)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Basic Skills; *Counselor Role; *Counselor Training; Elementary Secondary Education; School Counseling; *School Counselors; Student Needs; Teacher Role; Trend Analysis

ABSTRACT

This literature review addressing school counselor education is divided into four chapters. The first chapter contains an introduction describing the nature and purposes of the review and concludes with a presentation of the problem statements, focus questions, and technical information that guided the review process. It is noted that five questions guided the preparation of this literature review: (1) What are the basic skills?; (2) What is integration?; (3) How can educators of school counselors prepare counselors to help students acquire the basic skills?; (4) What is the counselor's role in helping students learn planning skills?; (5) What is the counselor's role in helping teachers integrate academic and vocational curricula? The second chapter contains information about how the review was conducted. It is noted that regrettably only a handful of empirically based manuscripts appeared in the preliminary screening of the literature, and these were largely descriptive surveys. The third and by far the longest chapter presents the results of the review and is organized around seven focus questions; these expand on the original five questions cited earlier by addiing two more explicitly addressed to basic skills acquisition in persons about to enter the workforce and variations in the degree to which such persons possess those skills. This chapter takes up each of the seven suggestions in turn and discusses each in detail. The fourth chapter summarizes the results and includes recommendations relating to issues critical to school counselor education. This chapter stresses that report after report expressed concern that the old basic skills, the ability to read, write, and compute, even if developed to once satisfactory levels, are no longer sufficient for the workplace of the 1990s and beyond. A list of 218 references concludes the document. (ABL)

LITERATURE
REVIEW

COUNSELOR
EDUCATION

ED348626

Counselor Role and Educational Change: Planning, Integration, and Basic Skills

REVIEW OF LITERATURE

CG024444

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☒ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Colorado State University

Funded by:
U.S. Department of Education
Office of Vocational and Adult Education

BEST COPY AVAILABLE

LITERATURE
REVIEW

COUNSELOR
EDUCATION

Counselor Role and

Educational Change:

Planning, Integration,

and Basic Skills

Richard W. Feller
Joseph L. Daly
Gene W. Gloeckner
R. Brian Cobb
Jaime Stefan
Cathleen T. Love
Jean L. Lamm
Betty A. Grant

School of Occupational
& Educational Studies
Colorado State University

REVIEW OF LITERATURE

Project Director:
R. Brian Cobb

Project Coordinators:
Nancy Hartley
Jaime Stefan

A citation of this document should appear as follows:

Feller, R., Daly, J., Gloeckner, G., Cobb, B., Stefan, J., Love, C., Lamm, J., & Grant, B. (1992). *Counselor Role and Educational Change: Planning, Integration, and Basic Skills: Review of Literature*. Ft. Collins, CO: Colorado State University.

©1992, School of Occupational & Educational Studies, Colorado State University. Contract Number VN90003001. Copyright Notice 17 USC 401/402. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright owner. Violators are subject to prosecution.

To order additional copies or request permission to copy, contact:

School of Occupational & Educational Studies
Education Building, Room 209
Colorado State University
Fort Collins, Colorado 80523
(303) 491-5871

Colorado State University

Funded by: U.S. Department of Education, Office of Vocational and Adult Education. Contract Number VN90003001. Project Officers: Bernice Anderson and Richard Di Cola.

This publication was prepared pursuant to a contract with the U.S. Department of Education, Office of Vocational and Adult Education. Contractors undertaking such projects are encouraged to express freely their judgement in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official U.S. Department of Education position or policy.

PREFACE

On October 1, 1990, the Office of Vocational and Adult Education of the U.S. Department of Education, under the authority of the Carl D. Perkins Vocational Education Act of 1984 (P.L. 98-524), funded a project to develop and disseminate materials to be used by educators who teach preservice school counselors and vocational education teachers. The purpose of the materials was to help these educators teach their preservice students how to integrate basic skills instruction into their future work. A component of this project was the development of two literature reviews — one in school counselor education and one in vocational teacher education — to guide the development of the preservice curricula. This is the literature review addressing school counselor education. Readers interested in the literature review addressing vocational teacher education should refer to Gloeckner, G., Cobb, B., Love, C., & Grant, B. (1992). Integrating basic skills into vocational teacher education curricula: review of literature. Ft. Collins, CO: Colorado State University.

TABLE OF CONTENTS

CHAPTER ONE 1
Introduction 1
Conceptualizing Basic Skills 3
Literature Reflecting Societal Concerns 3
Literature Reflecting Theories and Philosophies of Knowledge and Learning 3
Conceptualizing Basic Skills: Summary 4
Conceptualizing Integration 4
Curricular Integration 5
Facility or Environmental Integration 5
Integration Through Personnel 5
Counselor Role in Planning and Curriculum Integration 6
School Counselor Education and Acquisition of Basic Skills 6
Methodological Approaches 7
The Nature of the Literature 7
Organizational Format 7
Problem Statements 8
Focus Questions 8
Limitations 8
Delimitations 9
Assumptions 9

CHAPTER TWO 10
Sampling Design 10

CHAPTER THREE 12
Problem Statements 12
Focus Questions 12
Focus Question One 12
The Range of "Basic Skills" 12
Categorizing Basic Skills 16
Learning to Learn 19
Reading, Writing, and Mathematics 19
Communications 20
Adaptability 21
Problem Solving/Critical Thinking 21
Personal Management 23
Group Effectiveness 23
Influence 24
Technology 25
Science 25
Home/Family Management and Relationships 25

Focus Question One: Summary 26
Focus Question Two 26
Global Competitiveness of the WorkForce 26
Performance of Vocational Education 27
Focus Question Two: Summary 29
Focus Question Three 29
Changing Demographics of the Workplace and Workers 29
Size of the Labor Pool 30
Nature of the Labor Pool 30
Workplace Literacy 33
Characteristics of the School Curriculum 34
Focus Question Three: Summary 36
Focus Question Four 36
Comprehensive School Counseling and Guidance Programs for All 37
Business and Industry Training Capabilities 38
Focus Question Four: Summary 39
Focus Question Five 40
School Counselor Education 40
School Counselor Educators and Curriculum: Seeking Common Ground . . 41
School Counselor Education and Educational Reform 42
Planning School Counselor Education 42
Focus Question Five: Summary 44
Focus Question Six 44
Counselor Role and Finding a Focus 44
Focus Question Six: Summary 46
Focus Question Seven 46
Comprehensive Counseling and Guidance Programs, Planning, and Basic Skills 46
Focus Question Seven: Summary 48

CHAPTER FOUR 49
Summary and Recommendations 49
Practical Problems 50

REFERENCES 52

Counselor Role and Educational Change:

Planning, Integration, and Basic Skills

Review of Literature

CHAPTER ONE

Introduction

This is an age of accountability. Education professionals, like professionals in many other fields, are being called on to prove their job effectiveness. How effectively are school counselors serving the students they are hired to help? With all of the challenges facing students today — new, sometimes life-threatening challenges never before faced by people so young — the need for focused, accessible school counseling and guidance services has never been greater.

One of the most condemning facts of public education today is that it is not equipping tomorrow's workers with the skills they will need to keep competitive in a global economy (Carnevale, Gainer, & Meltzer, 1988; Secretary's Commission on Achieving Necessary Skills [SCANS], 1991). As technology continues to become more sophisticated, the skills needed to use that technology will also become more sophisticated. To make it in today's increasingly complicated world, all high schoolers, not just those bound for college, should be graduating armed with the solid academic competencies that are fast becoming requirements for landing and keeping good jobs with growth potential. Just as important, in this age of growing interdependence and rapid job change, high schoolers entering the workforce need to know how to get along with others and chart their life trajectories. These academic, interpersonal, and life planning abilities form the contemporary list of "basic skills" that high schoolers must have to stay on track in today's society.

All of this presents school counselors with a challenge of their own: If they can define their role concretely and prove their effectiveness in helping students prepare for life after high school, they can trade their traditionally peripheral, possibly expendable position in schools for a position of influence in matters such as school reform and restructuring. Currently, the most promising models for helping school counselors define their positions are *comprehensive counseling and guidance programs.*

Comprehensive counseling and guidance programs have four essential components that take the vagueness out of the school counselor's role (Gysbers & Henderson, 1988). These components are:

1. The Guidance Curriculum — Counselors provide structured activities or lessons in the classroom or in group situations, using this focused time with students to help them explore the "how to's" of learning, living, and working.
2. Individual Planning — Counselors help students think ahead and think for themselves. They work with students to teach them how to plan, monitor, and manage their lives. Activities may focus on empowering students to recognize their latitude in making educational, career, or personal choices.
3. Responsive Services — Counselors meet the immediate needs of students confronting personal or educational challenges.
4. System Support — Counselors work to sustain and enhance the implementation of comprehensive counseling and guidance programs.

An essential part of the effort to equip students with the basic skills is the integration of academic and vocational instruction. Integrating academic and vocational coursework allows students to apply academic theory and principles to problems encountered in real life settings. This applied approach to learning can enhance basic skills acquisition and provide continuity between the school environment and the workplace. The following review of literature examines the school counselor's current opportunity to become an essential resource for students getting ready to tackle the realities of contemporary life at work, at home, and in further education.

Five questions guided the preparation of this review of literature:

What are the basic skills?
What is integration?
How can educators of school counselors prepare counselors to help students acquire the basic skills?
What is the counselor's role in helping students learn planning skills?
What is the counselor's role in helping teachers integrate academic and vocational curricula?

First, the concepts of "basic skills" and "integration" were clarified in relation to curriculum, student options, and the counselor's role.

Second, the place of comprehensive counseling and guidance programs in the educational change process was investigated.

Third, procedures were selected to guide the methodological approach to the review. Questions to answer regarding these procedures were: (a) Which literature databases should be used and how should appropriate descriptors within those databases be identified? (b) Which abstracts should be included in the sampling frame? (c) Which sampling procedures should be used? and (d) How should the literature be organized and summarized?

Fourth and finally, an organizational format was selected: The reviewers posed several topical questions concerning the basic skills,

integration, and the role of the school counselor, and then presented a discussion of the collected literature in the form of answers to these questions. (Chapter Three includes this discussion.)

Conceptualizing Basic Skills

What are "basic skills"? Although simple to ask, this question is more difficult to answer. To do so, the reviewers divided the literature into two categories.

Literature Reflecting Societal Concerns

Several seminal publications reflected concern about this country's reduced economic competitiveness. Part of the problem, according to these publications, is that our educational system is not aligned with the needs of the American workplace (Carnevale et al., 1988; SCANS, 1991). Examples include the concern that the Russians were winning the at least symbolically lucrative race into space in 1957 when Sputnik was launched, triggering the emphasis on science education in the 1960s. More recently, anxiety over America's decreasing global competitiveness and the perceived inferior academic preparation of our youth relative to youth in other industrialized countries helped support the educational reform movement of the 1980s.

Such societal concerns have resulted in highly publicized documents, often by "blue ribbon panels" or "special commissions," stressing deficiencies of American youth and the educational system. Examples are the National Education Association (1894), Bruner (1963), Carnevale et al. (1988), and the SCANS report (1991). These documents usually list "basic skills" as missing from the core secondary curriculum. It seems that defining "basic skills" or outcomes of education is not a recent problem, nor is it likely to vanish at the turn of the century.

Literature Reflecting Theories and Philosophies of Knowledge and Learning

Another approach to identifying basic skills was to review the literature on the theories and philosophies of knowledge and learning. This literature set included, for example, the work of Gardner (1983; 1987), who postulated that there are seven different forms of intelligence. Similarly, Caine and Caine (1991) theorized that teaching and learning should be oriented around how the brain functions. If these theories are true, each should presumably be grounded in a foundation of "basic skills".

Another theory promoted the idea of knowledge categories. Maccia (1965) proposed four categories of information used to organize and develop knowledge: (a) descriptive, for knowledge of physical, biological, and social sciences; (b) prescriptive, for knowledge of the fine arts and humanities; (c)

praxeological, for knowledge of practice or doing; and (d) formal, for knowledge of logical systems (e.g., mathematics or language). One could, at least hypothetically, identify a set of basic skills fundamental to each of these.

The reviewers also found research presenting philosophical positions on knowledge and the purposes and outcomes of schooling. These could have been used to develop a rationale for defining essential or basic skills. An example: The report from the National Education Association's Commission on Reorganization of Secondary Education (1918) titled "Cardinal Principles of Secondary Education" presented principles believed to lead to social efficiency. The seven principles were: (a) health, (b) reading, writing, mathematics, and communication, (c) family, (d) occupation, (e) citizenship, (f) leisure and recreation, and (g) ethics and morality. Presumably, there would be a set of basic skills associated with each of these.

Given the globalization of the economy, the changing nature of the workplace, the changing role of the family, and the need for lifelong learning, the acquisition of basic skills will become a major element of individual career development (Herr & Cramer, 1992). This thesis is supported by the National Career Development Competencies (National Occupational Information Coordinating Committee [NOICC], 1989), which identified twelve career development competency categories in each level, K-Adult.

Conceptualizing Basic Skills: Summary

Contemporary definitions of basic skills stem from social conditions, economic factors, political pressures, and/or curricular goals, in conjunction with the value system of those developing the list of skills. Consequently, any list of basic skills in a review of literature such as this one should present the context in which the list was derived.

A common core of basic skills can be taught in either an academic or vocational curriculum, but many of the skills perceived to be basic for each can only be taught through involvement in each system. To be successful in the changing workplace, employees must possess skills which help them continue to learn, and skills which help them balance the pressures of family and work. The goal of this review was to include literature addressing basic skills needed to succeed in all these areas. To meet this goal, the reviewers have included literature reflecting both (a) societal concerns and (b) philosophies and theories of knowledge and learning.

Conceptualizing Integration

"What is integration?" The reviewers defined integration as one or more strategies which allow the combination of curriculum and/or instruction across multiple disciplines.

Integration has been viewed in three ways: (a) integration of programs or curricular content, (b) integration of facilities or physical environments, and (c) integration of personnel. It should be noted that in each of these, integration can occur by one of three means: (a) vocational education into liberal arts education (unidirectional), (b) liberal arts education into vocational education (unidirectional), or (c) liberal arts education and vocational education integrated simultaneously into each others' delivery systems (bidirectional).

Curricular Integration

The literature documents multiple approaches to integrating curricula (Plihal, Johnson, Bentley, Morgaine, & Liang, 1990; Drake, 1991; Fogerty, 1991). One approach, for example, is to fuse curriculum of two or more subjects, combining them into a new subject — for example, business and algebra to form business algebra. Another approach, a multidisciplinary one, is to focus on a single theme across a variety of disciplines. An example would be the design and building of a spacecraft, in which physics, music, home economics, and technology education curricula all incorporate lessons leading to the completion of the experience. The primary feature of curricular integration is that the curriculum content across two or more disciplines is integrated toward a common goal or theme.

Facility or Environmental Integration

Facility or environmental integration involves changes in building(s) or laboratory setting(s) such that two or more disciplines are taught together. For example, science and technology might both be delivered in an academy school. On a lesser scale, a vocational automotive teacher might use the physics laboratory for a series of lessons focusing on the resistance associated with braking an automobile.

Integration Through Personnel

Personnel exchanges may be used in integration. For example, a mathematics teacher may visit an automotive vocational class for two hours a week to teach the relevant mathematics. A second example: A business teacher and an English teacher may team teach a business communications course. Many of the newer content areas such as biotechnology, principles of technology, and applied communications often require the expertise of more than one teacher. Integration through personnel exchanges can work without fusing the two teachers' curricula or making physical changes to the classroom.

Each of these three ways of achieving integration is conceptually discrete, but two or even all three of them can be used together.

Counselor Role in Planning and Curriculum Integration

The integration models or strategies used by a faculty shape the curricular options available to students. Counselors often play a significant role in enhancing student awareness of these options and influencing student choices in course selection and career planning. Some counselors argue that good curriculum choices are not available to all students. Due to the large student to counselor ratios found in most secondary schools, many students never see their assigned counselor and end up selecting courses based on availability, instructor popularity, or other criteria which may have nothing to do with career choice. Factors such as counselor knowledge of course content or perceived bias regarding what types of students should take what courses influence the quality of career counseling available to students.

While not directly responsible for curricula, counselors are partly responsible for how students learn and what classes they take (Ohio Department of Education, 1991). Vocational funding often encourages counselors to promote vocational courses or work based learning as alternatives to academic classes. This may mean promoting vocational programs without thought for academic courses that should be taken, either simultaneously or prior to vocational program selection. Counselors who focus on the developmental needs of students instead of enrollment quotas are caught between (1) parental demands that students complete the seat time in academic classes to qualify them for college admission and (2) vocational teachers' concern about decreasing vocational enrollment figures. Faced with this dilemma, counselors point out that vocational education is best promoted when vocational and academic education are seen as complementary strategies necessary for student success, not as competing programs of study.

School Counselor Education and Acquisition of Basic Skills

The restructuring of educational institutions will require a long term commitment from people with time, resources, and determination (Goodlad, 1990). Unfortunately, implementing comprehensive counseling and guidance programs has not been a priority item in the school reform movement. This could be due to (a) hesitancy of school counselors to vocalize their positions, (b) school counselors' traditional isolation from schools' mainstream instructional program, or (c) counselors' limited involvement in reform (Levi & Ziegler, 1991).

Preservice efforts hold promise for influencing the development and implementation of comprehensive counseling and guidance programs, which could include information related to students' acquisition of the basic skills. Preservice instruction is addressing school counselors' need to be informed about how to (a) help students acquire career development skills (Hartz,

Novak, & Kosmo, 1977; Hansen & Keirleber, 1978; Hansen, Pelcak, Perreault, & Dege, 1980; Hansen et al., 1980; Phillips-Jones, Jones, & Drier, 1981), (b) plan guidance programs (Department of Adult Vocational and Technical Education, University of Illinois, 1979), and (c) use labor market information (Ettinger, 1991). Yet school counselors are still concerned about their ability to adequately provide for the planning needs of students (Peer, 1985; College Board, 1986; Lee & Ekstrom, 1987).

School counselors are trained to develop programs addressing social and personal adjustment, peer pressure, and many other important topics. How these programs enhance learning and academic achievement may be the most important measure of counselor accountability. The school counselor is foremost an educator, supporting students in their progress through school and serving as a crucial resource for academic programs (Bleuer, 1989).

Methodological Approaches

The Nature of the Literature

Chapter Two contains information about how this literature review was conducted. Preliminary screening of the relevant literature to define its parameters suggested that the bulk was theoretically based. This theoretically based literature included position statements, discussions of perceived needs and proposed solutions, philosophical views or arguments, and non-empirical descriptions of current projects. These publications were typically "best guesses" to problems and solutions related to basic skills and integration, and did not include original data supporting those positions.

Regrettably, only a handful of empirically based manuscripts appeared in the preliminary screening of the literature, and these were largely descriptive surveys. Experimental studies were extremely few in number. This preliminary information about the nature of the literature on basic skills and integration affected the review process.

Organizational Format

After considering a variety of formats for this review (e.g., Cooper, 1984; Slavin, 1986), it was decided to use a four chapter format, analogous to a report of primary research. This first chapter contains an introduction to the literature review itself, and concludes with a presentation of the problem statements, focus questions, and technical information that guided the review process. Chapter Two contains methodological information on the mechanics of the review: the sampling frame of theoretical and empirical literature, the literature databases, descriptors, etc. Chapter Three presents the results of the review, and is organized around seven focus questions. Chapter Four

summarizes the results and includes recommendations relating to issues critical to school counselor education.

Problem Statements

Two problem statements informed this review.

1. What are the basic skills which lead to success in education, work, and family, and how can these skills best be taught?
2. What information do preservice school counselors need to enter their profession well equipped to help students acquire the basic skills?

Focus Questions

To address these problem statements, seven questions were developed. Data collected through the review process were organized around these questions.

1. How are basic skills defined?
2. How successfully are those who are about to enter the workforce acquiring basic skills?
3. Why do those who are about to enter the workforce vary in the degrees to which they possess basic skills?
4. How can weaknesses in the basic skills of the workforce be remedied?
5. What is the status of school counselor education?
6. What is the role of the school counselor in educational change?
7. How do comprehensive school counseling and guidance programs address the issues of student planning and basic skills acquisition?

Limitations

The reviewers confronted several methodological limitations. First, they were hampered by a lack of published information on how to "review" non-empirical literature. A variety of texts were consulted. Most of these texts focused on social research methods (Kerlinger, 1973; Simon, 1978), research design (Cook & Campbell, 1979; Kennedy & Bush, 1985; Ary, Jacobs, & Razavieh, 1990; Wiersma, 1991), and research proposal development (Balian, 1982; Long, Convey, & Chwalek, 1985; Locke, Spirduso, & Silverman, 1987; Krathwohl, 1988). The chapters in these texts dedicated to the literature review process were minimally developed and solely concerned with how to use electronic literature databases and abstract material

from acquired literature. None gave guidelines for synthesizing the abstracted information.

A smaller number of texts were devoted exclusively to synthesizing research results (Glass, McGraw & Smith, 1981; Hunter, Schmidt, & Jackson, 1982; Cooper, 1984; Light & Pillemer, 1984). These texts focused on how to synthesize quantitative data from empirical research, with brief attention to qualitative data syntheses (see Light & Pillemer, pp. 104-143; Noblit, 1991). Again, however, no attention was given to synthesizing non-empirical literature.

This review was also limited by two other factors: The number of accessible literature databases was small, and the definitions of descriptors varied from one database to the next. As an example, in the Medline database, "integration" was not a key word, yet there may have been studies that explored topics related to integration as defined by this review.

Finally, this review was constrained by a predetermined limitation of staff and time to use in compiling it, dictated by the terms of the contractual arrangement mentioned in the Preface.

Delimitations

Data collection for this review was restricted primarily to electronic database searches. These searches identified relevant literature from both published and unpublished sources. Literature more than a year or two old and not in an electronic database may have been systematically excluded. However, a number of primary sources, as defined by Cooper (1984), were included even if not part of an electronic database. As examples, the SCANS Report (1991) and Comprehensive School Counseling Programs: A Review for Policymakers and Practitioners (Borders & Drury, 1992) did not appear in the electronic searches but were included because they were germane to this review.

Of the documents identified through electronic search procedures, only those with publication dates of 1985 or later were selected. Because of this delimitation, only the most current theories and research on the topics of integration, basic skills, and school counselor education are reflected in the literature review. References published prior to 1985 were used as background information to help, for example, in selecting the theoretical framework of and procedures for the review.

Assumptions

It was assumed that the electronic databases contained a representative sample of theoretical and empirical literature on the concepts of basic skills, planning, integration, and school counseling and guidance. It was also assumed that the key words used in the databases represented the concepts sought.

CHAPTER TWO

This chapter describes the sampling design employed by the reviewers. It also explains the techniques used to collect the literature and reduce the number of references from a large, general set to a smaller set relevant to this review. Procedures used to analyze and summarize the literature are also given.

Sampling Design

This literature review comprises published and unpublished writings that contain information on the subject of basic skills, integration, and comprehensive counseling and guidance programs as they are defined in the previous chapter. The sampling frame or accessible population of literature was derived from searching electronic databases and other purposefully selected primary sources of professional writings. Not all available electronic databases were searched. Judgment was used to determine which databases would be likely to contain substantive sources with theoretical or empirical findings regarding the subject of how school counselors can help integrate basic skills instruction into academic and vocational curricula.

Academic Index, American Business and Industry, Arts and Humanities Search, A-V On Line, British Education Index, Chemistry Industry Notes, Child Abuse and Neglect, Computer Database, Conference Papers Index, Current Contents Search, Dissertations Abstract International, Economic Literature Index, Educational Resource Information Citations, Exceptional Children Educational Resources, Family Resources, Information Science Abstracts, Language Abstracts, Medline, Microcomputer Index, Nursing and Allied Health, PsychLit, and Social Science Search.

The set of descriptors used to identify sources from the various databases were: *academic skills, applied academics, basic skills, employability skills, integration, secondary or postsecondary education,* and *vocational education.* These descriptors formed the primary set of items directing the search. Other descriptors used in the search specifically related to counseling were: *career awareness, career change, career counseling, career development, career education, career educators, career guidance, career planning, counselor role, counselors, counselor training, school counseling, school counselor,* and *school guidance.* Each of these counseling variables was then combined with the following descriptors: *accreditation, change strategies, college curriculum, competency based instruction, counselor certification, curriculum development, educational planning, equivalent credit, guidance programs, program improvement,* and *state standards.* Boolean logic was used, combining descriptors with "AND", "OR", and "NOT" statements to sort through documents in databases. This logic was then used to combine most of the terms with "OR" statements and then to impose the limitations of

secondary education, postsecondary education, and *vocational education* with "AND" statements.

With most literature databases, more than one search was used. The "germaneness" (Slavin, 1984; 1986) or "concepts to operations congruence" (Cooper, 1984) of the output from each preliminary search dictated the extent to which successive iterations with that database were conducted. For example, in many databases, the term "integration" yielded articles relating to the impact of different techniques of busing as a means of enhancing racial integration. Thus, these were eliminated from the review, and other descriptors were entered in the search to produce a more germane literature set.

Even with these multiple eliminative iterations, the electronic database searches produced in excess of 500 documents deemed to be directly pertinent to this review. Abstracts of these documents were then reviewed, and the entire dataset of abstracts was then partitioned into three major subsets of literature addressing these topics: (a) educational restructuring, (b) the changing workplace and workforce, and (c) the role of the school counselor.

Next, a preliminary review of 31 randomly selected manuscripts was conducted to explore their content and look for patterns of information. This review revealed substantial redundancies in the material. Hence, it was decided to conduct in-depth reviews of a simple random sample of approximately 25% of the documents identified in the database searches. This yielded a final sample of approximately 125 documents which made up the literature sample. Attempts were then made to locate hard copies of these documents. The citations within the review of literature reflect the hard copies of the samples that were located and read by the reviewers.

The written format of this review is generally consistent with guidelines in the Publication Manual of the American Psychological Association, Third Edition, (1983).

CHAPTER THREE

Problem Statements

Two problem statements informed this review.

1. What are the basic skills which lead to success in education, work, and family, and how can these skills best be taught?
2. What information do preservice school counselors need to enter their profession well equipped to help students acquire the basic skills?

Focus Questions

To address these problem statements, seven focus questions were developed. Data presented in this chapter are organized around these questions.

1. How are basic skills defined?
2. How successfully are those who are about to enter the workforce acquiring basic skills?
3. Why do those who are about to enter the workforce vary in the degrees to which they possess basic skills?
4. How can weaknesses in the basic skills of the workforce be remedied?
5. What is the status of school counselor education?
6. What is the role of the school counselor in educational change?
7. How do comprehensive school counseling and guidance programs address the issues of student planning and basic skills acquisition?

Focus Question One

"How are basic skills defined?" To address this question, literature was reviewed that describes the range of ideas circumscribing "basic skills." A categorization scheme was developed to organize this range of ideas.

The Range of "Basic Skills"

The term "basic skills" has different meanings for different people (Dunn, 1988). It often has political currency (Miguel, 1985), with employers using the term loosely to mean a degree of work readiness and a variety of work related sets of skills. Basic skills are often defined as those once referred to as the academic skills of reading, writing, and arithmetic (Miguel,

1985; Strumpf, 1986; Dunn, 1988; Lee, 1988; Owens, 1988; Pritz, 1988; Applying the Academics, 1989). In addition to this academic definition, "basic skills" are now also cited as social competencies, such as the ability to balance a checkbook or read safety instructions (Dunn, 1988). The term is also used to define attitudes found in successful workers, such as being dependable and responsible, coming to work on time, and being able to get along well with co-workers (Semple, 1987).

In a project sponsored by the Office of Educational Research and Improvement, Natriello (1989, pp. 2-6) summarized 13 studies focusing on the "needs of employers." Findings related to basic skills are shown in Table 1.

Table 1

Author/ Year/ Population	Findings
Baxter & Young (1982), 96 Mississippi employers	Study #1 - Attitudes related to working in association with others were rated most useful and as requiring the most emphasis in high school. Basic skills identified included: dependability, basic communication, thinking and problem-solving, and basic arithmetic. Study #2 - Poor communication skills and low interest were identified as reasons for rejecting job applicants.
Chatham (1983), 8 San Francisco companies	Characteristics that affected employee selection or performance included: communication skills, appearance, stable work experience, self-confidence, interviewing skills, desire to learn, accurate application, and grammar.
Chung (1979), 105 firms in Connecticut	Entry level workers were rated as generally deficient in the basic skills of mathematics, reading, and writing. Entry level workers also frequently lacked career goals and enthusiasm for the job.
Committee for Economic Development (1984), 678 large firms, 626 small firms and 500 post secondary institutions	Positive work attitudes and generic cognitive skills were rated as more important than job specific skills for entry level workers by both large and small businesses. Ability to learn and thinking skills were rated as most important for advancement.

Crain (1984), 1,912 employers	Dependability, proper attitude, being a good team member, and basic adult literacy were all rated as extremely important.
Gordon (1985)	Attitude and grammar were the two critical factors for successful interviews.
Gustafson & Groves (1977), 23 employers in New Hampshire	Trustworthiness, flexibility, appearance, respectfulness, and cooperativeness were rated as the top work attitudes.
Hulsart & Bauman (1983), 135 managers, 130 entry level employees, 45 military and 8 civilian instructors, and 57 young recruits in Colorado	Employers were interested in individuals who accepted responsibility, had an interest in serving a client, could work cooperatively with others, could handle money, and were dependable and punctual.
Illinois State Advisory Council on Adult, Vocational and Technical Education (1983), 100 employers and educators	Educators and especially employers stressed the need for youth to develop proper attitudes about work and realistic expectations about job content and wages, along with basic skills. They noted that they are finding an increasing number of young people who are from homes that never had anyone get up and go to work in the morning.
Junge, Daniels & Kantor (1983), 51 personnel administrators of the largest companies in the state of Illinois	Employers ranked the skills of communication and reasoning especially high. "Writing standard English sentences" was cited as the most serious deficiency.
Moon (1983), 50 companies in 16 states	Nearly every company noted the need to upgrade basic skills, especially language skills, basic math skills, and oral and written communication skills.

Owens and Monethey (1983), 780 employers in stratified random sample in Oregon	Employers noted problems in three stratified general areas: basic skills, work attitudes, and understanding of the business environment. Problem solving skills were often cited as deficient. While employers noted that students who had received training in specific job skills were generally proficient, they noted that employees had difficulty generalizing those skills. Employers felt the school should be responsible for basic skills and employers should be responsible for specific technical skills. Over half of the respondents noted a lack of acceptable work values; 30% noted a lack of job skills and knowledge.
Wilms (1983), chief employment and training officers at 172 Los Angeles and Torrance, California, companies	Most respondents (63%) reported that good work habits and positive attitudes were most important for success in the job. Substantially fewer respondents (23%) cited technical skills as most important, and fewer still (14%) cited linguistic and computational skills as most important. Employers also reported that technological changes have had little impact on skill requirements for entry level jobs.

A study conducted as part of a project from the Office of Vocational and Adult Education (Hull & Sechler, 1987) examined the nature and extent of adult literacy needs in the American labor force. Data for the study were collected from a review of literature, site visitations, and consultations with a panel of technical experts. Basic skills which were seen as being essential to successful job entry or to entry level performance were as follows: (a) reading, writing, and counting; (b) adding, subtracting, multiplying, and dividing numbers; (c) following written instructions; (d) writing legibly; (e) completing forms and applications adequately; (f) signing forms appropriately; (g) writing dates and times correctly; (h) knowing the letters of the alphabet; (i) discriminating among visual words; (j) using listening skills to identify procedures to follow; (k) using listening skills attentively; (l) applying information learned through listening; and (m) speaking face-to-face coherently (p. 27).

A four year study examined the variety of school and employer practices to help youth prepare for employment (Bishop, 1985). Data were compiled by contacting nearly 5,000 employers across the United States. The study identified the following basic skills: (a) communication skills — reading, writing, speaking, and listening; (b) mathematical skills; (c) knowledge and

understanding of science and technology; (d) reasoning and problem solving; (e) good study habits; and (f) motivation. The study included a set of recommendations for developing policy at the local level to improve students' preparation in these basic skills.

A study conducted by Knold (1986) assessed the attitudes of 702 Washington State employers toward vocational education at the secondary and postsecondary levels. Over 90% of the respondents indicated that a strong background in basic skills was essential for those graduating from vocational education programs. The most important competencies for high school and postsecondary vocational school graduates were positive work habits and attitudes. The employers believed that subject areas needing increased emphasis included mathematics and English. The report concluded that the integration of basic and employability skills should be an essential part of vocational education, and that a strong core curriculum of English, mathematics, and science was needed for all secondary students.

Categorizing Basic Skills

It is clear that researchers, educators, and employers define "basic skills" in many ways. These varied definitions make it challenging to differentiate basic skills and place them in specific categories. An extensive study by the United States Department of Labor and the American Society of Training and Development (Carnevale et al., 1988) guided the selection of the categories used in this literature review. The categories described in the study were broader than those cited previously in this review, yet they were narrow enough to help identify discrete subdivisions of skills. The study listed these basic skills categories: (a) learning to learn; (b) reading, writing, and mathematics; (c) communication; (d) adaptability (creative and critical thinking and problem solving); (e) personal management (self esteem, goal setting/motivation, and personal/career development); (f) group effectiveness (interpersonal skills, negotiation, and teamwork); and (g) influence (organizational effectiveness and leadership).

Most literature on basic skills fell naturally into one or more of these categories. However, other key documents indicated a need for additional categories. For example, a more recent study funded by the U.S. Department of Labor (SCANS, 1991), included **technology** as one of five key areas of basic skill competence needed by workers in America. **Science** was yet another category that appeared in the literature (Bishop, 1985; Knold, 1986; Project 2061: Science for all Americans, 1989). Project 2061: Science for All Americans (American Association for the Advancement of Science [AAAS], 1989) focused on the need for Americans to have a basic understanding of science. In acknowledgement of these studies, technology and science were added as the eighth and ninth categories of basic skills in this literature review.

Additionally, our own epistemological framework, grounded in the human development and home economics disciplines, suggested a need for a specific emphasis on balancing family pressures with those of education and work (Kline & Cowan, 1989; Way, 1991). Although the nine previous categories all contribute to success in home and family life, the literature convinced us of the need to add a tenth and final category of basic skill. Thus, **home/family management and relationships** was added to the list.

Finally, in 1986, the National Occupational Information Coordinating Committee [NOICC] developed general categories of student competencies comprising the hoped-for results of comprehensive school counseling and guidance programs (Table 2). These National Career Development Guidelines, a major collaborative effort of professional associations, state and local agencies, and school districts, were developed to strengthen and improve counseling and guidance programs nationwide. To further define these guidelines, specific competency categories grounded in human development, career development, and counseling were written for each guideline (NOICC, 1989). Many of these categories, comprising the optimal outcomes from implementation of the National Career Development Guidelines, contain attributes similar to those of the previously mentioned basic skills.

The categories of basic skills reviewed in this document, then, are organized around the following ten categories: (a) learning to learn; (b) reading, writing, and mathematics; (c) communication; (d) adaptability (creative and critical thinking and problem solving); (e) personal management (self esteem, goal setting/motivation, and personal/career development); (f) group effectiveness (interpersonal skills, negotiation, and teamwork); (g) influence (organizational effectiveness and leadership); (h) technology; (i) science; and (j) home/family management and relationships. A detailed review of the literature documenting the legitimacy and viability of each of these categories of basic skills is presented below.

Table 2

The Twelve Competency Categories of the National Career Development Guidelines

1. Know the importance of self concept and learn the skills to maintain a positive one.
2. Possess skills to interact positively with others.
3. Understand change, growth, and transitions.
4. Understand the relationship between education and career opportunities.
5. Develop positive attitudes and skills to participate in work and life-long learning.
6. Locate, evaluate, and interpret career information.
7. Possess job seeking and job changing skills.
8. Understand how society's needs and the economy influence the structure of work.
9. Learn to make decisions.
10. Understand the interrelationship of work and life roles.
11. Understand changes in male/female roles and their impact on occupations.
12. Understand career planning and be able to make transitions.

These competencies fall within the guidance curriculum content areas of self knowledge, educational and occupational exploration, and career planning, and are complementary to skills needed for success at work, school, and home.

Learning to Learn

Workers must be able to assimilate new information, adapt to new technologies, and prepare to be occupationally mobile (Zuga & Lindstrom, 1989). As competition forces American industry into new patterns, workers will be required to shift from one job role to another and accept changing responsibilities. Workers will be required to absorb, process, and apply new information quickly and effectively (Champagne, 1986; Carnevale et al., 1988). To do this, individuals must be skilled at integrative thinking — the ability to use disparate sets of skills and concepts interactively under changing conditions (Chisman, 1989).

Thus, the ability to learn and apply new skills is becoming more and more important based on estimates that people will need to learn new skills in the workplace every two to three years (Miguel, 1985). Learning to acquire new skills gives the worker the ability to adapt (Blai, 1989) and solve problems (Crismore & Mikulecky, 1987). Future workers need to consider education as a continuous process throughout a working lifetime (Ten Recommendations for Improving Secondary Vocational Education, 1985; Champagne, 1986). Learning to learn adds transition skills which provide the ability to move easily from one occupation to another (Patterson, 1985). Learning to learn appears to be the most basic of all skills. It enhances the application of other basic and higher order skills, providing the key to future success.

Individuals who have the ability to learn and apply new skills interactively can achieve competency in all other skills, from basic reading to leadership (Carnevale et al., 1988; Champagne, 1986). Learning to learn proficiency appears to be acquired through a variety of student experiences within the total educational curriculum (Foodservice Subject Matter Update, 1986-87). A school curriculum with learning to learn as a priority would include a liberal arts education of reading, literature study, writing, mathematics, social studies, and science. The curriculum would also emphasize the ability to start, continue, and complete tasks within a given time (Patterson, 1985). Beyond these curricular elements, however, students who are learning to learn also require opportunities to explore how the content of what they have learned can be combined in different ways to achieve new understandings.

Reading, Writing, and Mathematics

Although the skills required for the jobs of the future will be more complex than in the past, the ability to read, write, and compute will remain essential. In fact, the required level of competency in reading, writing, and computation will increase. Possessing these "traditional" basic skills will

relate directly to workers' success in an increasingly complex work environment (Buskirk, 1988).

In its 1989 publication, "Everybody Counts: A Report to the Nation on the Future of Mathematics Education," the Mathematical Sciences Education Board of the National Research Council [NRC] stated:

> **Reality:** Today's world is more mathematical than yesterday's and tomorrow's world will be more mathematical than today's. As computers increase in power, some parts of mathematics become less important while other parts become more important. While arithmetic proficiency may have been "good enough" for many in the middle of the century, anyone whose mathematical skills are limited to computation has little to offer today's society that is not done better by an inexpensive machine (p. 45).

This study indicates that the importance of mathematics (more sophisticated mathematics) as a basic skill is increasing. Over 75% of all jobs require proficiency in simple algebra and geometry, either as a prerequisite to a training program or as part of a licensure examination (NRC, p. 4).

Reading skills are essential at all levels of employment and are correlated with superior job performance (Mikulecky & Ehlinger, 1986). Mikulecky (1982) found that of the 276 writing tasks required to perform jobs listed in the Dictionary of Occupational Titles, more than 42% involved filling out prepared forms and more than 22% involved generating memos or letters. Another 25% of job writing tasks required recording, summarizing, or noting work completed. Clearly, writing is a skill that is required for successful employment and advancement.

Communications

Communication skills reflect how well individuals get along and how effectively they interact with their peers (Semple, 1987). Communication involves both verbal and nonverbal expression through writing, comprehension, speaking, listening, conversation giving, receiving instructions, and attending to others in a positive way (Ten Recommendations, 1985; Fitzgerald, 1986; Carnevale et al., 1988; Carnevale & Gainer, 1989; Carnevale & Johnston, 1989; Bailey & Novelle, 1989). Generally, people communicate by listening and speaking. People spend a great deal of their day in some form of communication: on average, 8.4% of their time writing, 13.3% reading, 23% speaking, and 55% listening (Semple, 1987, p. 11).

The ability to express oneself clearly to others and listen carefully and actively are important worker competencies (Patterson, 1985). Success on the job is linked to good communication skills; only job knowledge ranks higher

as a factor in workplace success (Semple, 1987; Carnevale et al., 1988; Welter, 1989). Although communication involves skills other than writing, employees of the future must also be able to write under complex conditions. Writing, as with speaking, relies on abilities in the areas of analysis, conceptualization, synthesis, and distilling of information. Writing requirements in the workplace of the twenty-first century will likely be characterized by a shift from relatively long narrative to clear, succinct articulation of thoughts (Carnevale et al., 1988).

Adaptability

Adaptability includes creative thinking, critical thinking, and problem solving (Carnevale et al., 1988). As workers become more autonomous within the workplace (Blai, 1989), adaptability becomes more necessary. Being able to think creatively and critically and to solve problems enables workers to make well considered decisions. More specifically, these skills will provide employees with the ability to generate alternatives, estimate outcomes, assess probabilities and take action and risks (Carnevale et al., 1988).

Problem Solving/Critical Thinking

Skills in problem solving and critical and creative thinking include the abilities to plan, analyze, synthesize, evaluate, organize, and manage information (Patterson, 1985), and to set priorities for determining alternatives (Fitzgerald, 1986). Problem solving requires an understanding of the processes needed to apply knowledge. These skills provide the worker with the ability to detect a problem, find or invent a range of probable solutions, choose the most appropriate solution for the conditions, and track and evaluate results (Crismore & Mikulecky, 1987).

An assumption made frequently in the literature is that students retain information more readily if they have used that information to solve problems. Responding to this assumption, the medical field is beginning to embrace the use of problem based learning, and has developed instructional processes which require students to apply knowledge through the use of case studies. The literature suggests that medical students may learn better through a combination of problem based learning and applied academics than through traditional instruction (Cardiff, 1986).

A report by the Association of American Medical Colleges Project Panel (cited in Schmidt, Dauphinee, & Patel, 1991) suggested sweeping changes in the way medical schools deliver professional training. The panel suggested offering education that requires students to be active, independent learners and problem solvers rather than passive recipients of information. These recommendations have been taken seriously by the medical profession, and medical schools around the world have begun to adopt a problem solving

model over the past ten years. Some of the medical schools have maintained both types of instruction: a conventional, lecture oriented approach, and a problem based case study approach. Comparisons, therefore, are relatively easy to make, and preliminary results of these comparisons have yielded equivocal results. Schmidt et al. (1991) reviewed the results of 15 studies comparing the outcomes of problem based/community oriented medical curricula with those of conventional programs. Surprisingly, the differences in achievement show that students of conventional schools scored significantly higher at the end of their four years of study than those in schools where problem based instruction was dominant.

In a related study (Santos-Gomez, Kalishman, Rezler, Skipper & Mennin, 1990), 130 medical school residents were compared on the basis of their performance in a problem based medical curriculum and a parallel conventional track. Eight criteria were examined: knowledge, communication with patients, independent learning ability, teamwork, patient education, critical thinking ability, attention to health care costs, and self assessment. Significant differences were observed in the areas of attention to health care costs and communication with patients; students in problem based learning programs performed better than students in conventional training programs.

Newble and Clarke (1986) also compared problem based instruction with traditional instruction in medical schools and found evidence that students who have experienced the problem based approach to learning appear to have an orientation to future learning which more closely approximates the aims of medical schools. Shahabudin (1987) reported that regardless of whether or not lectures had been given, students recalled facts better if they had encountered a related clinical problem through a case study, one of the key elements of problem based instruction.

Heale et al. (1988), in a randomized controlled trial, found that problem based teaching in the undergraduate program promoted better recall by students. The problem based group scored significantly higher than the lecture taught group on the knowledge test, chart audits, and treatment of simulated patients (pp. 74-76).

Arand and Harding (1987) found that performance on a test of critical thinking was affected by one course designed to introduce allied health students to problem solving. The study demonstrated consistent, positive effects of a problem solving course taught early in the students' educational program. Although improvements in critical thinking were delayed, not being evident until a year later, statistically significant improvements in grade point average were evident much sooner than that.

Norman (1988) has offered an alternative explanation for the positive effects of problem based learning. The author concludes that evidence from a variety of fields of inquiry shows that clinical expertise is characterized, not by the possession of any superior general thinking strategy such as critical thinking, but by the availability in the student of an extensive, organized body

of specialized knowledge. In other words, in order to be a critical thinker or problem solver in any specific field of study, an individual must have an extensive knowledge base in that field, and problem based learning may simply allow students to learn more information more efficiently than they could by traditional instruction. Rather than enhancing the ability to apply or understand existing information, the author concludes, problem based learning may enhance the ability to acquire and retain new knowledge.

Personal Management

Personal management includes such skills as goal setting, self motivation, personal and career development, and the ability to acquire and maintain self esteem. Dramatic changes in the workplace have made personal management an essential skill (Welter, 1989; Carnevale & Gainer, 1989; Berryman, 1988). Workers with these skills have the tools for expanding their skills inventory, can manage and cope with change more effectively, and are more productive in their work (Pucel, Devogel, & Persico, 1988; Carnevale & Johnston, 1989;).

As the workplace continues to change and as workers become more autonomous (Blai, 1989), a worker's well developed sense of self esteem becomes critical. Self esteem allows workers to develop confidence in their ability to do their work and to adjust as conditions change around them. Carnevale et al. (1988) suggest that individuals can be trained to increase their own self esteem.

Key components of self esteem training include helping employees: (a) recognize their current skills; (b) be aware of their impact on others; (c) understand their emotional set-points and abilities to cope with stress, change, criticism, and so on; and (d) recognize their own limits and seek new information to apply to problems when necessary (p. 13).

Workers with personal management skills demonstrate a more sophisticated awareness of themselves as individuals with marketable talents and abilities. They recognize the need for adding to their skills inventory and can be proactive in dealing with the frustrations of the workplace. These characteristics are becoming increasingly important with the increased complexity and changing demands of the workplace. Lack of these skills is suggested to be the root cause of other problems in the workplace, such as production errors and absenteeism (Carnevale et al., 1988).

Group Effectiveness

Due to the pooling of resources in most industries, workers are being asked to perform a multiplicity of tasks. To perform these tasks, workers must have an array of social skills that individual or routine jobs do not require (Carnevale et al., 1988). Included in this array are a variety of human

interaction skills that fall under the general rubric of group effectiveness skills.

Group effectiveness skills are considered the cornerstones of successful teamwork (Carnevale et al., 1988). As industry increases the use of worker teams to enhance productivity and to downsize middle management, these skills are becoming increasingly important (Executive Report, 1989). Successful performance in work settings that require autonomous teams depends upon a worker's ability to interact, defuse conflict, and develop a sense of group purpose (Carnevale et al., 1988). Group effectiveness skills are also essential for service industry occupations in which employees encounter and must respond satisfactorily to customer complaints (Carnevale & Johnston, 1989).

Group effectiveness includes interpersonal skills, negotiation skills, and the ability to work cooperatively with others (Buskirk, 1988; Carnevale & Johnston, 1989). Specific skills associated with group effectiveness include attending to others in a positive way (Fitzgerald, 1986), resolving conflict, managing stress, establishing networks with others (Patterson, 1985), and performing well in group interaction settings(Bailey & Novelle, 1989).

One of the most important interpersonal skills associated with group effectiveness is conflict resolution. Conflict is a natural condition resulting from individual differences in values and opinions. As worker teams encounter conflict situations, team members must be able to resolve the conflicts, most often through achieving consensus.

Influence

Influence refers to the impact of a member upon an organization. It comprises (a) organizational effectiveness, which is the ability to understand how the parts of an organization function together, and (b) leadership, which is the ability to guide the process by which one or many of those parts function smoothly. Workers need to have a sense of how their actions affect the ability of the organization to meet its goals (Carnevale & Johnston, 1989).

All organizations have a culture. The culture of the organization and the worker's ability to function within that culture becomes as important as specific job skills held by the worker (Carnevale et al., 1988). With an understanding of what the organization values and how that is put into practice, workers will become fully functioning, productive, and empowered members of the organization. Once a worker understands the organization's culture, leadership skills can be used in positive and productive ways. To remain competitive, industry needs its employees to be able to assume responsibility and motivate others (Carnevale et al., 1988).

Technology

The Secretary's Commission on Achieving Necessary Skills (SCANS, 1991) has produced a set of basic skills projected to be of increasing importance for workers in the year 2000. This set of skills considerably overlaps that of Carnevale et al. (1988). The SCANS report differentiates five competency areas (use of resources, working with others, use of information, understanding of complex systems, and working with technology), and three foundation sets of skills (mathematics and communication, thinking, and personal qualities). Technology is the one major competency area included in the SCANS report that was not also included in the report of Carnevale et al.

The SCANS report concludes that workers need to be competent in three general areas relating to technology: appropriate selection, effective application, and successful maintenance and trouble-shooting. The SCANS conclusions are supported by those of another national study, Project 2061: Science for All Americans, (AAAS, 1989). Like the SCANS study, the AAAS study states that technological knowledge is and will remain a key skill for current and future members of the workforce. Understanding new technologies is a basic skill that will become increasingly important to American workers' competitiveness in a global economic environment and a rapidly changing workplace (AAAS, 1989; NRC, 1989; Dyrenfurth & Kozak, 1991; SCANS, 1991).

Science

It was surprising that many frequently cited national reports excluded science as a discrete basic skill. This review has relied heavily upon the conception of basic skills outlined in Carnevale et al. (1988), a source often cited as an exemplary "basic skills document." However, both the Carnevale report and the SCANS report (1991) omit science as a competency area.

In contrast, other national reports focus on science as the key missing component in the United States' reduced ability to compete in a global market (Bishop, 1985; Knold, 1986; AAAS, 1989). And even the reports that omit science as a primary competency area often include many of the competencies traditionally associated with science, such as critical thinking, problem solving, interpreting, and evaluating. For these reasons, this review includes science as a key basic skills category.

Home/Family Management and Relationships

Data collected in the past five years have emphasized the interrelationship between success at home and success in the workplace (Kline & Cowan, 1989; Way, 1991). Personal management is directly related to family management (Goldsmith, 1989). Group effectiveness, influence,

adaptability, communication skills, and the love of learning all begin in the home (Goldsmith, 1989), as does interest in technology, science, reading, writing, and mathematics (Felstehausen & Schultz, 1991). Thus, successful family and home management skills may enhance the acquisition of other basic skills in school and may support the demonstration of those skills in the workplace. This assumption supports the philosophical framework upon which this review is founded — that strong academic, thinking, and interpersonal basic skills stem from success at home. Consequently, we have included home/family management and relationships as part of the theoretical set of basic skills.

Focus Question One: Summary

The first focus question asked, "How are basic skills defined?" Given the most recent evidence from the literature and the philosophical framework of this review, there appear to be ten categories of basic skills that youth need to assume their roles as adults in the workplace. Those categories included the following: (a) learning to learn; (b) reading, writing, and mathematics; (c) communication; (d) adaptability (creative and critical thinking and problem solving); (e) personal management (self esteem, goal setting/motivation, and personal/career development); (f) group effectiveness (interpersonal skills, negotiation, and teamwork); (g) influence (organizational effectiveness and leadership); (h) technology; (i) science; and (j) home/family management and relationships. Thus, these ten categories of skills provide an operational definition of the term "basic skills." In addition, many of the National Career Development Guidelines (NOICC, 1989) support student acquisition of competencies that resemble these basic skills.

Focus Question Two

"How successfully are those who are about to enter the workforce acquiring basic skills?" To answer this question, reviewers looked at literature that addressed the following issues: the degree to which our youth are prepared to compete in global markets, and employers' perceptions of vocational education's effectiveness in preparing youth for the demands of the workplace.

Global Competitiveness of the WorkForce

As the United States' domination of the world's economy diminishes (Fitzgerald, 1986; Owens, 1988), the skill level of the workforce has come under increased scrutiny (Bishop, 1985; Fitzgerald, 1986; Berlin & Sum, 1988; Dronka, 1988). Many factors affect the quality of American industry and the position that the United States holds in the competitive international marketplace. Many recent reports claim that our current workforce lacks

essential skills (Carnevale et al., 1988; Lee, 1988; Owens, 1988; Carnevale & Gainer, 1989; Chisman, 1989; Executive Report, 1989; SCANS, 1991). Carlivati (1990) reported that the United States faces major problems as a result of the widening gap between labor skills needed by industry and those presently held by workers.

Although a great deal has been written regarding the skills gap, there is no comprehensive information explaining whether this lack of skills stems from a deficiency of behavioral and/or operational competencies (Anderson & Steward, 1989). Techniques currently used to measure skill levels are considered unsatisfactory (Chisman, 1989). Regardless of how accurate these techniques are, what is clear is that employers are dissatisfied with the degree of knowledge and skills possessed by youth entering the workforce (Carnevale, et al., 1988; Bottoms, 1989; Executive Report, 1989). This problem directly affects the country's economic position (Pucel et al., 1988). Carnevale et al. (1988) indicate a well defined linkage between the skill level of the existing workforce and the ability of employers to make the changes necessary to remain competitive in the global marketplace. The basic skills outlined earlier in this review are those that employers often identify as necessary for a better trained workforce.

Performance of Vocational Education

Students who completed vocational education programs in the late 1970s and early 1980s were well tracked in numerous follow up studies of vocational education graduates. However, information on employer satisfaction with vocational education graduates has greatly diminished since then, probably due to the relaxation of the VEDS (Vocational Education Data System) follow up requirements in P.L. 98-524. Only one relatively recent statewide survey emerged in the literature search. The South Carolina State Council on Vocational and Technical Education (1986) conducted a mail survey of more than 1,200 employers from that state. The purpose of the survey was to gather information regarding South Carolina employers' perceptions of and experiences with vocational education, its graduates, and entry level workers in general. Results of the mail questionnaire revealed that:

1. Among the employers from various sectors who participated in the survey, over 31% said they were not getting enough qualified applicants for entry level positions. Applicant shortages were most acute in the construction industry (building, masonry, etc.).
2. Over 60% of the respondents who hired bank tellers, sales clerks, some types of production/assembly workers, and customer oriented service workers (food, beverage, hotel, janitorial) said these employees typically required on-the-job

training (OJT). Pre-employment occupational training appeared to be most important in construction (skilled jobs), finance, insurance, transportation (drivers), and mechanical service/repair industries, but these employers also provided some OJT. Workers employed in client service occupations (health, social services) and in secretarial fields were expected to need little OJT.

3. The four worker characteristics most preferred by employers were: good work habits and attitudes, interpersonal skills, specific job skills, and prior work experience.
4. Nearly three fourths of all respondents said they preferred to hire workers who had received vocational training over those who had not received training. Nearly one half of the employers surveyed said they benefitted directly from secondary vocational programs, usually because graduates of these programs performed well and required less additional training; another one fourth of the respondents said they had little experience with vocational education programs because they hired few employees or required an advanced degree for most positions; the remaining one fourth said they failed to benefit from vocational education programs due to lack of knowledge about such programs and lack of appropriately trained workers, or dissatisfaction with those interviewed or hired. Employers in the manufacturing sector and those employing a large workforce (over 50) benefitted most frequently from vocational education programs.
5. Nearly all (90%) of the respondents said that "encouraging the development of good work habits such as dependability and job commitment" should be a priority role for vocational education. Providing job specific training for noncollege-bound students and teaching the application of basic skills in various occupations were also identified as important.
6. According to the employers surveyed, the most relevant accountability measure for vocational education programs should be the satisfaction of employers who hire vocationally trained workers. These employers also ranked training-related placement rates and program responsiveness to local needs as important measures of program effectiveness.
7. When asked how vocational programs could better serve their needs, employers responded with answers similar to those obtained in other such ratings. The majority of employers cited the following ways to meet their needs: role modeling positive work habits and attitudes, developing or expanding specific programs, building closer ties to business and industry, and

placing more emphasis on the teaching of basic skills.

8. Industry developments expected to have the greatest impact on training needs included "computers" (application, not necessarily programming or repair), automated production equipment, and electronics. In service industries, many employers cited the growing need for good communication and customer relations skills.

Although these results are limited to South Carolina, they appear to reflect vocational education needs in other states. In Tennessee, for example, 60% of employers surveyed agreed that high school students have low levels of basic skills (Petty, McNelly, & Serle, 1989). To be globally competitive, students will need the help of vocational educators in acquiring and learning to use these skills.

Focus Question Two: Summary

Studies vary in the way they categorize basic skills, but their results reflect general agreement among employers on the importance of these skills and the direct influence they have on job performance. The United States is falling behind other developed countries in its ability to compete in areas such as the production of goods. Academic test scores of U.S. public school graduates are also declining. Most employers would not answer affirmatively if asked Focus Question Two, "How successfully are those who are about to enter the workforce acquiring basic skills?" Vocational education may be able to serve as an ameliorative force, helping to improve the country's economic and scholastic forecasts. While some continue to support the conceptual or symbolic role of secondary vocational education programs (Kliebard, 1990), most employers support the idea of these programs' serving as conduits of the practical, basic skills that new members of the workforce must have to succeed on the job today.

Focus Question Three

"Why do those who are about to enter the workforce vary in the degrees to which they possess basic skills?" The literature suggests that several demographic and workplace literacy issues, along with school curriculum concerns, affect the degree to which students acquire basic skills.

Changing Demographics of the Workplace and Workers

In the past, the solution employers used when facing a skill level deficiency was to raise wages and attract individuals with greater skills (Welter, 1989). The nature of today's workforce has made this practice less

successful. Shifts in both size and nature of the labor pool have altered hiring practices (Chisman, 1989).

Size of the Labor Pool

The demographic profile of today's labor pool is significantly different from that of only a few decades ago. The baby boom era has passed, leaving a declining number of entry level workers (Strumpf, 1986; Feldman, 1987; Lee, 1988). Berlin and Sum (1988) reported a decrease in the total size of the young adult population. The total number of young adults is predicted to decline by more than one fourth between 1979 and 1995 (Berlin & Sum, 1988, p. 24). As fewer young adults enter the workforce (Miguel, 1985), employers will have to reach further into the labor pool to meet their needs. This may lead to the hiring of workers whose skill levels are insufficient to meet the demands of the job (Strumpf, 1986; Carnevale et al., 1988).

Nature of the Labor Pool

A larger share of this declining pool of entry level workers will be composed of women, minorities, and other disadvantaged groups (Strumpf, 1986; Berlin & Sum, 1988; Carnevale et al., 1988; Pritz, 1988; Wade & Williams, 1988). The Executive Report of the Jobs for Indiana's Future (1989) confirmed that "the labor force growth between 1980-87 was 15 percent female and 3 percent male" (p. 12).

As a group, individuals who will become the new workforce have been less successful in school than previous generations of workers (Lee, 1988). As a result, they will enter the labor market further behind than their predecessors in development of marketable skills (Bottoms, 1989; Executive Report, 1989). A large proportion of these individuals will lack many of the traditional basic skills such as adequate reading and writing abilities, which will in turn prevent them from gaining and holding good jobs (Chisman, 1989). No empirical literature was located documenting how women, minorities, and disadvantaged groups compare to the general labor force regarding possession of basic skills. The perception, however, is that these individuals are at least as lacking in these skills as other new workers.

At first, the way to remedy skill level deficiencies in women, minorities, and disadvantaged groups appears to lie in improving their educational opportunities. The problem, however, is much more complex. Lack of basic skills may be the tip of the iceberg, signifying far more serious problems. In a survey of disadvantaged youth with poor levels of basic skills, Carnevale and Johnston (1989) found "68 percent had been arrested, 85 percent were unwed mothers, 79 percent were welfare dependents, 85 percent were dropouts, and 72 percent were unemployed" (p. 14).

Berryman (1988) suggested that factors other than learning abilities produce these statistics:

> All individuals develop an image of their niche in the adult world in the ecological sense of niche. The research shows that they work out notions of their basic futures and of the trajectories relevant to them . . . Differences may partly reflect differences between at-risk and not-at-risk learners in their visions of their adult places in the world (p. 11).

Similarly, Miguel (1985) suggested that success in the labor market is not dependent simply upon skill levels but is also a result of an individual's locus of control, which helps to determine behavior and choices.

The empirical research dealing with minorities in the labor force, therefore, suggests that there might be logical connections between development of the locus of control and the ecological niche within minority populations (Berryman, 1988). Fitzgerald (1986) asserted that although the relationship between education and work status is positively correlated, the relationship is not as strong for blacks as it is for whites. In fact, "as black educational attainments have been increasing, black labor market position has been deteriorating relative to whites" (p. 258). Even when black youths find jobs, their earnings are consistently below those of white males (Fitzgerald, 1986).

Women also find that job qualifications and level of income are not as well correlated for them as for the general labor force. Employers have traditionally regarded women as high turnover employees (Fitzgerald, 1986, p. 258). They often assume that women will interrupt their careers to marry, have children, or move away in response to their husbands' career demands. These employers may be reluctant to train women employees for advancement, believing that training costs might not be recouped. As a result, women, even if well educated, in general do not earn as much as white males. Women high school graduates employed full time were not financially better off than men who had failed to complete elementary school (Fitzgerald, 1986, p. 259). Black women are even more dramatically affected by such conditions within the workplace. They earn less than any other group in the labor force (Fitzgerald, 1986). It is possible that this negative relative work status is a factor in the occupational choices made by women. Women choose a more limited range of occupations and have lower occupational expectations than men (Mote, Morton & Marshall, 1986).

Socioeconomic status is directly correlated to choice of occupation: A person in a lower socioeconomic class is likely to choose a lower level job. Groups of workers often found in the lower socioeconomic classes and who generally hold lower level jobs are: ethnic minorities, women, rural youth

(Mote et al., 1986; Berryman, 1988) and individuals with handicapping conditions (Harnisch, Chaplin, Fisher, Tu, Decker, & Danielson, 1987a). Between 50% and 80% of all individuals with handicapping conditions are unemployed (Harnisch et al., 1987a), and yet only 38% of those individuals indicate that lack of marketable skills hinders them from working (Harnisch, Fisher, Kacmarek, & DeStefano, 1987b). Employed individuals with handicapping conditions generally work in unskilled or semi-skilled positions (Harnisch et al., 1987a), the very positions rapidly disappearing in American industry. It is often assumed that individuals with handicapping conditions are at the bottom of the employment hierarchy due to an inability to acquire necessary and appropriate work behaviors or an inability to transfer acquired skills into other work settings. These assumptions have not been supported by research (Harnisch & Fisher, 1988).

Minorities, women, rural youth, and individuals with handicapping conditions will compose an ever increasing percentage of the labor pool of the future. These populations are often described as having: low self esteem, an external locus of control, a different work value orientation, an unrealistic attitude toward the world of work, a lack of occupational information, low performance in school, and less education than others (Miguel, 1985; Fitzgerald, 1986; Mote et al., 1986). In many cases, these conditions help shape vocational choices, which then restrict the ability of these individuals to move upward economically (Fitzgerald, 1986). Minorities, women, rural students, and people with handicapping conditions are more likely to remain in positions which lack upward career movement opportunities, and to be unable to adjust to the changing needs of the workplace (Korcheck, 1987). To make it possible for members of these groups to become productive members of the workforce, new methods of instructional delivery will probably be necessary (Lister, 1985).

Preparing students for the world of work, whether the entrance to work is immediately after high school or after postsecondary education, has been the task of the nation's school system. The elementary and secondary public schools are fairly effective at preparing the college-bound student, but have been less effective in educating and training the noncollege-bound student (Carnevale & Gainer, 1989). At one time the employment sector was able to find room for students who left school with less than the optimum amount of educational proficiency, and the income associated with semi-skilled or unskilled employment was still reasonably adequate to support a household. Both of these characteristics of the American workplace appear to be rapidly diminishing.

Workplace Literacy

The workforce is more literate than ever before, but increasing literacy requirements on the job have outpaced gains in worker literacy. Workers at the turn of the century could easily be successful with less than a high school reading ability. Today, technical materials require the ability to read at a 10th to 13th grade level or higher (Bottoms, 1989). In addition, the amount of reading time on the job has increased: "In 1950, about 17 percent of all jobs included information processing tasks; in the early 1980s, this had reached 54 percent and it continues to rise" (Blai, 1989, p. 12). Bottoms (1989) indicated literacy requirements are increasing in a broad range of American industries. Lee (1988) reported that 98% of all occupations require a worker to read for an average of 61 to 113 minutes each day.

Because of these increased literacy requirements, approximately 27 million adults now rank as functionally illiterate. Functional illiteracy is defined as a reading ability at or below the fifth grade level. Another 45 million, considered only marginally literate, read above a fifth grade level but not well enough to meet the requirements of the workplace (Jurmo, Wiggenhorn, Packer, & Ziegler, 1989). These individuals are often chronically unemployed, or employed in unskilled jobs (Lee, 1988).

The problem of the literacy gap in American industry is becoming more and more critical. According to Dunn-Rankin and Beil (1989), by the year 2000:

> approximately 40 percent, or 10 million jobs, will be professional and technical positions requiring language skills of Level 4 or better. (A U.S. Labor Department standard rates jobs on a scale of 1 to 6. A Level 1 job requires a vocabulary of 2,500 words and the ability to write a simple sentence. A Level 6 job requires the use of technical journals, financial reports, and legal documents). Another 58 percent, or 15 million jobs, will be marketing and sales, administrative, services, supervisory, and similar positions requiring skill levels between 2 and 3.9. (Level 2 requires a vocabulary of 5,000-6,000 words, a reading rate of 190-215 words per minute and the ability to write compound sentences. Level 3 requires the ability to read safety rules and equipment instructions, and the ability to write simple reports.) Only 2 percent, or about a half million jobs, will require language skills less than 2.5. (pp. 3-4)

The definition of literacy is also expanding to include technological literacy. Employers are becoming increasingly dependent upon the technological skills of their workers (Carnevale et al., 1988; Carnevale & Gainer, 1989). Today, the added skill level required by employers is, in part,

a result of the increased technology used in the workplace (Jurmo et al., 1989). The heightened skill requirements imposed by increased technology appear to be a primary contributor to a growing problem: A gap is widening between the basic skills employers need in workers and the types and levels of skills those workers actually possess (Lee, 1988). Skills which once would have allowed a worker to move from an unskilled labor classification to a semi-skilled classification are now considered necessary for entry level (Patterson, 1985; Carnevale et al., 1988; Lee, 1988; Blai, 1989; Executive Report, 1989). For example, the banking industry now considers a two year college degree as entry level for positions that once were classified as clerk-typist positions, due largely to the computer based skills necessary in almost any banking position (Bailey & Novelle, 1989).

The upward shift in skill level requirements is not new: Each generation of workplace innovations has called for increased skill levels. The difference today lies in the rapidity of the upward shift (Patterson, 1985).

Patterson (1985) cites the work of Christopher Deed, a futurist at the University of Houston at Clearlake. Deed defined the term "occupational skill half-life" as the time that it takes for half of the knowledge, training and/or skills of an occupation to become obsolete. During the first half of the twentieth century, an occupational half-life was estimated at approximately 25 to 40 years for most occupations. Today, workers face an occupational half-life between four and five years, and for technical occupations, 18 months. As Patterson (1985) has indicated, the speed at which new information reshapes occupations in the information age is at least five times faster than the rate at which changes occurred in the industrial age. This leap into the information age has led to an unprecedented demand for process skills in employees. Change is occurring so rapidly that the workforce of the year 2000 will need to develop the skills necessary for their immediate work and the ability to adapt quickly to increasing demands of the future (Blai, 1989). The school counselor is the person most likely to provide effective assistance in developing process skills in students (George, 1986).

Characteristics of the School Curriculum

Curricula have become more complex, and student demographics have become more heterogeneous. Schools are facing the challenge of increased levels of accountability regarding dropout rates.

To curb dropout rates, schools are testing a variety of curricula. Several of these emerged simultaneously (Powell, Farar, & Cohen, 1985): (a) the horizontal curriculum, which offers an array of courses, (b) the vertical curriculum, which offers subjects of varying degrees of difficulty, (c) the extracurricular curriculum (sports and other nonacademic or vocational activities), developed to attract students to an activity which makes them feel competent or successful, and (d) the services curriculum, where emotional and

social problems deemed educationally valid are addressed. According to Thompson (1992) many school counselors have assumed increasing responsibility in all of these curricula, with emphasis being placed on the services curriculum.

It remains questionable whether school systems will be able to meet the needs of all students. Given the rapid upward shift of skill level requirements needed in today's workplace, organizational patterns and instructional methods that were appropriate for graduating 9% of our youth in 1910, or even 29% in 1930, may well be inappropriate in attempting to provide a four year high school education for 75% of our youth today (Dunn, 1988, p. 379).

Astin (1967) reported that shifts in vocational plans that occur during high school tend to move students away from science and technology and toward courses in business education. The trend toward more "nonacademic" enrollments was confirmed in a review of more than 6,000 high school transcripts covering course enrollments from 1964-1980 (Adelman, 1983). The review report concluded:

> (T)here seems to have been a systematic devaluation of academic (and some vocational) courses . . . by high school students. While the number of required courses increased in the 1970's, students in 1980 were still spending less time in academic subjects and more time in courses that might be described as "personal service and social development." (p. 13)

Little empirical evidence exists documenting the academic success of vocational completers compared to other students (Bottoms, 1989). Bottoms (1989) found that many administrators, teachers, and students in secondary education perceived vocational classes as easy electives. This perception is consistent with the commonly held belief that "vocational/technical students are substantially lower on the educational orientation than their noncollege-bound counterparts," reflecting an indifference or dislike for school and coursework (Thompson, 1992, p. 256). This mindset had led many counselors to adopt the notion that vocational education is a less intellectually rigorous curriculum than is the college preparatory curriculum. Attempting to raise classroom expectations while maintaining enrollment figures is a problem facing vocational teachers as a result of this perception. Raising expectations of student performance is commendable, but appears to be insufficient in raising the academic skill levels of all students. Vocational students should be required to meet the same academic standards as nonvocational students (Bottoms & Korcheck, 1989).

According to the United States Government Accounting Office (1990), the U.S. invests more in college-bound students than in noncollege-bound students. The literature suggests that American youth are substantially underprepared in the contemporary basic skills that are needed for the

workplace of the 1990s and beyond. Four relatively complex and interacting etiologies have been posed for this: (a) a dramatically increased proportion of students who are "at risk" academically, economically, and culturally; (b) a significant reduction in the number of entry level workers needed to fill available positions; (c) two concurrent trends in the characteristics of the workplace — an increase in the technological complexity of semi-skilled and skilled positions, and a decrease in the number of unskilled positions; and (d) a relatively static general curriculum (vocational curriculum, specifically), which has been unresponsive to the changing dynamics of the present public school population and the contemporary workplace.

Focus Question Three: Summary

Making students aware of the need to "keep learning to keep up" is a key element in educating today's youth. Any successful school curriculum must incorporate this concept. Labor market data indicate that most new jobs will be in the professional, technical, managerial, and administrative fields. A great majority of employment opportunities with futures will require post high school education (Berlin & Sum, 1988). All schools and all curricula have a responsibility to prepare students for these realities.

Focus Question Four

"How can weaknesses in the basic skills of the workforce be remedied?" To investigate this question, literature related to school change, comprehensive school counseling and guidance programs, and business/industry training programs was reviewed.

Bottoms (1989) suggested that, rather than increasing coursework to address basic skills needs, schools consider developing vocational education study programs. This kind of study program would fundamentally change what individuals would learn, how they would learn it, and who would need to learn it (Berryman, 1988; Executive Report, 1989). Vocational education would then serve two purposes: It would prepare students for immediate work and for continued learning, either in a work setting or an educational one (Bottoms, 1989).

Dunn (1988) reported that, as employers have begun to require more highly skilled workers, basic academic skills are becoming the content of vocational education. Fitzgerald (1986) indicated that what were once considered vocational competencies are now valued in all students. When teachers and the general public were asked what skills students should have regarding work, they offered four broad categories: (a) traditional job values such as good work habits and attitudes, (b) job advancement and promotion skills, (c) risk taking and personal responsibility skills, and (d) career decision making skills.

There is some evidence that schools are attempting to combine instruction in basic skills and vocational education. In a recent study of 893 vocational classrooms in 120 high schools across 24 states, it was found that basic academic skills were a part of instruction at 62% of the sites. Explicit attempts to enhance basic skills, however, were noted in only 2% of the cases, indicating that students still are not being adequately prepared with skills required by the modern workplace (Owens & McClure, 1989). If students are to truly benefit from these programs of study, new curriculum designs and efforts which ensure the acquisition of basic skills need to be implemented by organized guidance programs. To benefit from such processes, all students need access to comprehensive, systematic, and sequential career development activities.

Comprehensive School Counseling and Guidance Programs for All

Advising students is a counselor's most challenging responsibility, requiring both the right information and the right timing if the student is to be motivated to think and act (Miller, 1991, p. 260). In attempting to confront the problem of what Grubb (1990) calls the "collapse of guidance and counseling," many schools have tried to implement a new counseling and guidance program. Grubb's observations from work conducted for the National Center for Research in Vocational Education led him to state:

> (I)f students are to make coherent and informed choices about their futures . . . they have to have some way to get the requisite information which is now . . . largely lacking in American high schools.

This seeming lack of attention by school counselors to the planning needs of students appears to be due to a combination of counselors' lack of awareness of the full range of career opportunities available to students and counselors' being burdened with many non-career guidance duties (Hoyt, 1990a).

A current response to this dilemma is the development of comprehensive counseling and guidance programs. Comprehensive counseling and guidance is the "umbrella program" of the 1990s (Gysbers, 1990), designed to provide all students with certain life competencies through personal, social, and career counseling. Comprehensive counseling and guidance programs take a programmatic rather than a passive, service approach to counseling, employing four interactive components: a guidance curriculum, individual planning services, responsive services, and system support. These programs call for counselors' active participation in classroom and student group settings, leading activities meant to give students the knowledge they need to succeed at work, at home, and in future education.

These programs call for counselors' reduced involvement in administrative and clerical work. They place counselors in fewer one-on-one counseling situations. At the same time, they strengthen counselors' accountability for proven effectiveness at helping all students prepare for the world beyond high school (Gysbers, 1990).

According to Ivey and Rigazio-Digilio (1991), four basic types of general counseling models exist: (a) medical models focusing on the body, (b) psychological models emphasizing the mind and spirit, (c) family systems models focusing on the individual in a familial context, and, (d) holistic educational-developmental models concentrating on the physical and mental interactions important to education.

As an integral component of the educational process, the counselor can incorporate the best features of all four models to help youth develop educational, social, career, and personal competencies necessary to become responsible, productive citizens. Fundamental strategies of this educational process include individual counseling, group counseling, group guidance, consultation, and coordination (O'Bryant, 1991). Curriculum guides for systematic planning and practical implementation of comprehensive school counseling and guidance programs are available. (Myrick, 1987; Gysbers & Henderson, 1988; NOICC, 1989).

Models of comprehensive counseling and guidance programs provide blueprints for shaping educational practices, influencing policy, and facilitating plans to enhance basic skills achievement (Cole, 1988; Sweeney, 1988; Drier, 1989; Hoyt, 1989).

Business and Industry Training Capabilities

Chisman (1989) estimated that 75% of the labor market of the year 2000 is presently in the workforce. Changing the educational system will not improve the insufficient skill levels of these individuals. The burden of improving the skill levels of the existing workforce will most likely reside with business and industry training programs. In 1983, 75% of the largest corporations in the United States offered some type of basic skills training for their current employees, and nearly one fifth of organizations with more than 50 employees provided some form of remedial basic skills education (Lee, 1988). In many cases, however, the training being delivered was targeting workers in white collar and technical positions, not groups with the greatest educational needs (Carnevale et al., 1989).

While large corporations have discovered that the commitment to basic skills training is cost effective (Lee, 1988), such training is expensive. Carlivati (1990) reported that American businesses spend in excess of 25 billion dollars each year in what might be called pre-remedial training. Pre-remedial training is training necessary to develop workers into avid new skills learners.

For small businesses, training presents numerous problems (Sticht, 1986). Small businesses have not traditionally been involved with the delivery of training, and therefore are often not ready to assume the role of trainer or the expense of establishing training programs. Many managers of small businesses know little about the training process or about available training opportunities (Executive Report, 1989). Some small businesses do not have a sufficient number of employees to permit them to offer training during the work day. They need their employees on the job, all day, everyday, and can ill afford the lost work time required for effective training (Bottoms, 1989; Carnevale et al., 1989).

Half of all present jobs are located in small businesses. It is estimated that as many as 40% of all new jobs being created will be in this sector (Carnevale et al., 1988). Patterson (1985) reported that approximately nine million new jobs will be created by small business in the 1980s, 10 times the growth rate of this sector in the 1970s.

Focus Question Four: Summary

The essential challenge facing school counselors is to help students become ready to function in an ever changing workplace, rather than to help them become proficient at a few specific tasks (Dunn, 1988). This workplace competence will allow students to adjust rapidly to increased workplace demands and changing job requirements, skills significantly different from those needed in the past (Jurmo et al., 1989).

Industry wants workers who can think, get along with others, and adapt to change (Dees, 1990). To provide such resilient workers, educators must ensure that all students, regardless of their immediate plans after high school, receive instruction in the basic skills. In conjunction, comprehensive school counseling and guidance programs must become more closely aligned with the instructional program in schools.

Society is demanding that students be prepared to encounter real work situations (Lister, 1985). Although teachers can apply a variety of techniques to help students learn basic skills, the foundation of these techniques is likely to be the development of an integrated instructional program applying academic skills in the context of an occupational area (Pritz, 1988; Bottoms & Korcheck, 1989). Vocational education cannot afford to remain an isolated part of the school experience, one which focuses only upon specific job preparation. It must make academic skill acquisition part of its instruction (Dorsten & Smink, 1988). Vocational education must be integrated with academic education to create well rounded individuals (Owens, 1988). Applied vocational instruction demonstrates the need for the academic and functional proficiencies which result from vocational education. Thus, school counselors must have knowledge about program offerings and be prepared to provide advising and career planning around a coherent and challenging

program of study. Comprehensive counseling and guidance programs help students acquire many of the basic skills necessary for success in the workplace and the home. This is achieved through a guidance curriculum, as well as individual planning and responsive services needed to maximize students' instructional experiences.

Focus Question Five

"What is the status of school counselor education?" This area of inquiry deals with the status of preservice school counselor education. School counselor education must be examined by first looking at the training of counseling and mental health professionals. A vast majority of counselors trained to work in educational settings are also trained to work in various other non-educational settings. As a result, some counselor education programs have limited information or courses related to comprehensive school counseling and guidance.

School Counselor Education

While counselor training (specifically, mental health counselor training) is usually based in schools of education (Ivey & Rigazio-DiGilio, 1991), school counselor training is not. School counselors therefore usually know little about teaching or curricula. A third of all secondary students become education casualties; one way to significantly improve this situation would be for counselor educators to press for changes in the educational system to make curricula more relevant to preservice counselors' future work (Gazda, 1991). Preservice school counselors rarely share coursework with preservice vocational teachers. Vocational teacher education continues to receive sparse, if any, attention in school counselor education programs. This belies the fact that a generation of post National Defense Education Act (NDEA) counselor educators, people who *know* the value of vocational education, is taking hold of the profession. Hoyt (1990b) states:

> With NDEA's "intellectually able student/college attendance" emphasis, it is easy to understand why most of the new counselor educators employed for the first time between 1958 and 1961 had little concern for, nor interest in, vocational aspects of guidance, nor for noncollege-bound students. It was much easier for them to learn the basics of what was then called "nondirective counseling" than to acquire the considerable substantive knowledge required to become expert in the career development process. Similarly, it was easier for them to concentrate primarily on counseling problems of only intellectually able students. (p. 57)

While the need for school counselors is recognized, (Boyer, 1983; College Board, 1986; Matthay, 1991), the need to train school counselors specifically *as* school counselors is not. Counselor education programs have cut the number of courses focusing on school counseling (College Board, 1986, p. 28). Sweeney (1988) acknowledges this lack of focus:

> For counselor educators, developing community counseling programs, counselor licensure, accreditation of programs, national certification, and professional identity have been major issues . . . [but] school counselor education has drifted to a lesser position in the minds of most counselor educators (p. 155).

Currently, school counselor preparation programs in the United States are usually part of programs which train counselors as "generalists," devoting little attention to the specific needs of school populations.

School Counselor Educators and Curriculum: Seeking Common Ground

In most counselor education programs, counselor educators must cover more than one program emphasis (Walz & Benjamin, 1983). More and more counselor educators are teaching preservice school counselors about the benefits of comprehensive counseling and guidance programs, but rarely do they inform them of the benefits to students of integrating academic and vocational curricula. At best, counselor education programs might exhibit a strong commitment to developing comprehensive counseling and guidance programs and coursework in career development. Rarely are such topics as vocational curriculum options, the revitalization of vocational education, or school restructuring mentioned.

Schools need knowledgeable, well trained professional counselors to lead comprehensive counseling and guidance programs that address both the responsive (clinical) needs and the guidance (advising and career planning) needs of students. Theories of counseling drawn from psychology have defined practice in the counseling field too long; developmental theory should take a more prominent place in counseling curriculum and practice (Ivey & Rigazio-DiGilio, 1991, p. 27). In the 1980s, the American School Counselors Association considered moving away from the American Counseling and Development Association "at least partially because training in counseling theory is often too abstract and not relevant to mental health counseling in the schools" (p. 27). Shertzer (1991) stated:

> For many years school counselors have been saying to counselor educators that the 'clinical model' (their label for individual behavioral processes) was not sufficient for the responsibilities assigned to them or the goals they sought to accomplish (p. 34).

Counselor educators, accrediting bodies, and professional associations are addressing questions of specialty areas of emphasis and common core requirements. However, they have yet to come to consensus on the specific competencies needed by school counselors, and how to deliver those competencies.

School Counselor Education and Educational Reform

As a group, counselor educators have not responded in any significant way to the recent school reform movement (Aubrey, 1984; Herr, 1984; Hohenshil, 1987; and Hoyt, 1989). One exception: Hull and Parnell (1991) addressed the role of the school counselor in "tech prep" programs. Training sessions and curriculum products on comprehensive school counseling and guidance programs, fostered largely by the National Occupational Information Coordinating Committee (Feller, 1990; Bailey, Bruce, Rotter, & Sampson, 1992) have stimulated some interest in curriculum reform but have had little impact as yet on changing counselor education programs (Hoyt, 1990b).

The following national reports have made observations about the incongruence between school counselors' training and school counselors' (a) actual job duties and (b) standards of job performance: High School, A Report on Secondary Education in America (Boyer, 1983); Unfinished Agenda (National Commission on Secondary Vocational Education, 1984); Closing the Information Gap: Ways to Improve Student Awareness of Financial Aid Opportunities (National Student Aid Coalition, 1985); Frontiers of Possibilities (National Association of College Admissions Counselors, 1986); Keeping the Options Open (College Board, 1986); The Forgotten Half: Non-College Youth in America. An Interim Report on the School-to-Work Transition (William T. Grant Foundation Commission on Work, Family and Citizenship, 1988); Beyond Rhetoric: A New American Agenda for Children and Families (National Commission on Children, 1991); Guidance and Counseling: A Shared Responsibility (Herr, 1991); and The National Career Development Guidelines: Progress and Possibilities (NOICC, 1991).

Planning School Counselor Education

School counselor preparation requirements and evaluation standards lack uniformity. Herr (1989) suggested that, because the issues counselors help clients resolve are always changing, counselors' effectiveness depends on the degree to which their programs are systematically planned, tailored to local

priorities, and defined in terms of results, not services. Today's school counselor must be skilled at (a) aiding students in longitudinal planning and (b) recruiting parents, teachers, and the community to help steer students into positive paths leading toward their personal life goals. The preservice school counselor's training in these skills, however, is often minimal or lacking.

Stone (1985) identified a series of dilemmas facing educators of school counselors: Is it the role of counselor educators to prepare instruction for preservice school counselors in the broad base of counseling and guidance services? Is their role to prepare specialized training to teach preservice school counselors about current problems facing today's youth? Or, is it their role to revise curricula to focus on traditional roles while also addressing specific current problems? Stone recommended that educators of preservice school counselors adopt a curriculum incorporating a common core of learning plus a selection of environmental and specialized studies.

Education professionals need to be familiar with the skills, philosophy, and body of knowledge fundamental to counseling psychology (Meyen, 1988). Baker (1992) suggested that counselor education is a balance between two applied professions: counseling and education. He argued that:

> School counseling is a profession with the behavioral sciences and the applied fields of counseling and education as its foundational departments of learning, and a profession in the process of developing its own knowledge base (p. 273).

Linking theory, preparation, and practice is essential in preparing school counselors. With change as the norm, preservice school counselors need to be ready to function in a variety of roles, including those of teacher, planner, organizer, collaborator, consultant, confidant, interventionist, guidance curriculum specialist, and advocate (Hackney, 1990).

Clearly, preservice school counselors need a more specific, focused program that arms them with the essentials of professional renewal. Accomplishing this will be no small challenge (Walz & Bleuer, 1991):

> Consider for a moment what we are saying to our students as we present this new model [developmental guidance], with its inherent change in counselor role and functions. The message is this: (a) present school guidance practices have become barnacled by administrative and other non-guidance duties, thus impeding, if not negating, the efforts of school counselors to provide guidance services to youth; (b) existing practices that have focused upon individual and responsive services reach only a small portion of the school population, thus denying the majority of students access to guidance services; (c) this shrinkage of services, paired with the diffusion of counselor role

> and function, has led us to the precipice of existence as a viable service to school populations. What the school counseling profession must do is (d) reconceptualize our role as serving all students by providing preventative skills, and reducing non-guidance related administrative duties. In the words of Gysbers and Henderson (1988), these functions include the guidance curriculum, individual planning, responsive services, and system support (Hackney, 1990, pp. 2-3).

Focus Question Five: Summary

Schools require fundamental changes to address the needs of today's students. To adequately prepare students to function effectively in all spheres of contemporary life, schools must begin to move toward integrating vocational and academic curricula and stress instruction in the basic skills. Similarly, preservice programs for school counselors require fundamental changes. In addition to their traditional clinical training provided by the general counseling curriculum, preservice school counselors need training in (a) the challenges facing today's youth, (b) teaching methods, and (c) comprehensive counseling and guidance programs. These must become integral components of the curriculum used in preservice school counselor education.

Focus Question Six

"What is the role of the school counselor in educational change?" It is anticipated that the delivery of school counseling services will dramatically change in the next five years (Shertzer, 1991). This change should result in school counselors' being much more involved in and affected by school restructuring.

Counselor Role and Finding a Focus

The National Commission on Excellence in Education (1983) and the SCANS report (1991) highlighted concerns about the quality of American schools, the declining test scores of students, and the need for restructuring public education. The potential role of the school counselor in addressing these concerns received little mention in these reports. Yet, at least in the area of restructuring schools to integrate academic and vocational curricula, school counselors have long stood as advocates (Feller & Daly, 1992).

Most school reform recommendations emphasize the need for students' acquisition of the basic skills. Schools have had to provide more than just academic programs in order to meet this need (Herr, 1984; Patterson, 1984; Bundy & Boser, 1987; Ivey & Goncalves, 1987; Gerler, 1988; Miller, 1988;

Omizo & Hersberger, 1988; Allen & Gardner, 1989). While academic achievement can lead to a strong self concept, many students cannot succeed without attention to and support of their personal and emotional agendas (Shertzer, 1991).

School counselors must continually be involved with professional renewal if they are to understand the changing needs of youth and the problems facing our society. Issues such as drug and alcohol abuse, suicide, physical and sexual abuse, death and dying, stress, and AIDS emphasize the need for counselors to regularly update the services they deliver, or they will remain "a profession in trouble" (College Board, 1986). The lack of clarity in the school counselor's role and function "persists because school counselors attempt to embrace two masters: education and psychotherapy" (Thompson, 1992, p. 5).

Data from 333 heads of public high school guidance programs confirmed that secondary school guidance was undergoing intensive reappraisal (Moles, 1991). The future of school counselors depends on whether they can prove their effectiveness in helping students make decisions on social, personal, educational, and career issues (Coy, Cole, Huey, & Sears, 1991). Although school counselors frequently find themselves in ill-defined roles, without administrative or community support, and vulnerable to budget reductions (Peer, 1985), they must be involved in the change process and be prepared to facilitate change in curricula and delivery of services.

Setting educational priorities and determining the availability of resources are useful when defining student needs and determining the future of school counseling (Herr, 1989).

To arrive at a national consensus on the role of the school counselor requires individual counselors, state education offices, counselor preparation programs, and counseling professional associations to agree on and design uniform programs. Reports suggest the potential of improving school counseling through systematic efforts to develop uniform school counseling programs (Ponzo, 1989; Wakelee-Lynch, 1990; NOICC, 1991).
Some states are developing such programs. In addition, the Association for Counselor Education and Supervision and the American School Counselor Association have created an interdivisional task force to address this subject (Cecil, 1990; Deck & Cobia, 1992).

To redesign school counseling programs and change the role of the school counselor will require a shift from the traditional service model to results based counseling and guidance programs (Gysbers, Hughey, Starr, & Lapan, 1992). Proponents of comprehensive counseling and guidance programs must clarify how these programs fit into the mission of the school, and how they will be accountable for specific student outcomes (Herr, 1991). With the large student to counselor ratio in schools, it is essential that parents, staff members, students, and the community become partners in comprehensive counseling and guidance programs. Then, and only then, will school

counselors meet the expectations of the many constituents they serve, and become factors in educational change.

Focus Question Six: Summary

Focus Question Six asked, "What is the role of the school counselor in educational change?" Counseling programs hold the potential for systematically addressing the needs of a society facing pervasive and traumatic problems within its schools. While it is unwise to assume that there is one right role for school counselors, it is clear that a stronger relationship between the tasks of the school counselor and the educational priorities of the nation will support the continuing evolution of the profession. School reform initiatives will proceed, regardless of the role school counselors play in promoting them. Schools are being pressured to maintain academic achievement as their major purpose; other student needs are not always addressed. Successful school counselors, cognizant of educational priorities and limited availability of resources, will translate their activities into comprehensive and systematic strategies for planned program delivery. Counseling and guidance programs designed to achieve student, school, and community goals will become more proactive, service oriented, and developmentally focused on the needs of students.

Focus Question Seven

"How do comprehensive school counseling and guidance programs address the issues of student planning and basic skills acquisition?" To examine this question, literature on the components of comprehensive counseling and guidance programs and their potential effects on basic skills related outcomes was reviewed.

The traditional school counseling program has been organized around a counselor-clinical-service model (Gysbers, 1990). Although the guidance counselor's role in curriculum development and delivery is minimally addressed in the literature (Levi & Ziegler, 1991, p. 36), the role is seen as legitimate by most authors (Cole, 1981, 1986; Griggs, 1988; Bailey, Deery, Gehrke, Perry, & Whitledge, 1989; Keogh et al., 1989).

Comprehensive Counseling and Guidance Programs, Planning, and Basic Skills

A developmental comprehensive counseling and guidance program facilitates the role of the counselor in helping students with individualized planning. It also lays the foundation for the relationship between guidance curriculum and basic skills acquisition. Gysbers's (1990) view of comprehensive counseling and guidance programs, consisting of four components (guidance curriculum, individual planning, responsive services,

and system support), is the most dominant and consistently replicated model within statewide efforts (Iowa State Department of Education, 1986; Michigan Department of Education, 1987; Alaska Office of Adult and Vocational Education, 1988; Idaho Department of Education, 1988; Missouri Department of Education, 1988; Nebraska Department of Education, 1991; Nevada Department of Education, 1991; New Hampshire State Department of Education, 1988). According to the 1991 ASCA President, within comprehensive school counseling and guidance programs, it is the counselor's responsibility to students:

> to articulate the relevance of basic skill acquisition to their lives . . . I see the counselor as a student advocate who understands how to assess various student talents and preferences and thus is a valuable aide to the teacher in helping the student to maximize his/her learning. As an example, when we talk about [adding instruction in] critical thinking skills into a curriculum, we are really talking about presenting information in a new way. (N. Perry, personal communication, March, 1991)

Four core principles (Borders & Drury, 1992) characterize effective school counseling programs: independent, integrated, developmental, and equitable. They are distinct from a loosely related set of services, and are integrated into all areas of the traditional curriculum, with the underlying purpose of facilitating the instructional process. Communication skills naturally fit into the language arts curriculum, problem solving skills into science and math, social skills into social studies, and mental health skills into health and science (Gysbers & Henderson, 1988). A meta-analysis (Baker, Swisher, Nadenichek, & Popowicz, 1984) of 40 studies found positive results in programs that emphasized career development and communication skills.

Effective school counseling and guidance programs are based on human development theories that emphasize sequential, hierarchical stages of functioning within the various developmental domains. They actively facilitate the personal, social, educational, and career development of students (American School Counselor Association, 1984). Equitable programs serve all students; those who are gifted and talented, low achieving, and those with average abilities or special needs. Those in ethnic, cultural, sexual orientation, and any other "special groups" are equally provided with educational and career information. Comprehensive counseling and guidance programs insure that all students are served (Shaw & Goodyear, 1984; Myrick, 1987). In addition, program goals should include interventions to increase awareness, acceptance, and appreciation of cultural diversities (American School Counselor Association, 1988).

Academic performance gains on achievement tests and improved basic skills acquisition have been attributed partly to career guidance education

(Bhaerman, 1977; Herr, 1978; Hoyt, 1980; Trebilco, 1984) and counseling (Gerler, Kinney, & Anderson, 1985; Wilson, 1986). Arni and Bancroft (1990) documented how Guidance Learning Activities (GLA's) conducted across the entire English curriculum grades 10-12 were good methods for teaching many of the basic skills related to the guidance curriculum.

Splete and Stewart's (1990) work reviewed competency based career development strategies found in the 12 competency categories of the National Career Development Guidelines and identified 1,514 abstracts included in the ERIC database between 1980 and 1990. Of the activities reported at the K-12 school levels, the most frequently cited were skills in locating, evaluating, and interpreting career information. Support of a positive self concept was the self knowledge competency most often found in the literature. The most frequently reported competency at the junior high and high school levels was skill at making career transitions. Understanding the continuing changes in male/female roles was the most frequently addressed competency at the elementary level.

Comprehensive counseling and guidance programs are particularly beneficial to students learning the basic skills and planning techniques to help them structure their futures. As school counselors enter the profession with enhanced knowledge and skills to provide comprehensive school counseling and guidance for all students, improvements in basic skills achievement can be expected. School counselors may be better than other school professionals at providing instruction related to the basic skills. To help students in this way, however, educators may need to change their perceptions of the counselor's role in schools.

Focus Question Seven: Summary

The reviewers found very few sources in the literature that addressed how comprehensive school counseling and guidance programs can help students learn to plan and to acquire the basic skills. However, the reviewers did find articles examining the many outgrowths of the principles postulated in the 1970s to make education more relevant to the workplace (Hoyt, 1980). The increased interest in comprehensive school counseling and guidance programs and the counselor's role in integrating academic and vocational education could help strengthen the counselor's role in schools.

CHAPTER FOUR

Summary and Recommendations

Skills held by youth entering the American workforce appear to be different from the skills they most need for economic self sufficiency. Report after report has expressed concern that the old basic skills — the ability to read, write, and compute — even if developed to once satisfactory levels, are not sufficient for the workplace of the 1990s and beyond. The more contemporary set of basic skills includes the attitudes, knowledge, and behaviors needed to function in an increasingly self directed, interpersonal, and technological workplace. These skills include: learning to learn; reading, writing, and computing; verbal and nonverbal communication; adaptability (including creative thinking and problem solving); personal management (including self esteem, goal setting/motivation, and personal/career development); group effectiveness (including personal skills, negotiation, and teamwork); influence (including organizational effectiveness and leadership); ability to use and understand technology; ability to apply the knowledge of science to work situations; and the ability to balance and manage family and work.

Schools are being presented with the challenge to integrate these new basic skills across their curricula. Vocational educators have historically been first to respond to changing skill needs in the workplace. But all students work, not just vocational students. Thus, the call for integrating basic skills into vocational education is part of a larger demand to make the education of all students more relevant to their entry into the workforce. Learning theory suggests that training in these basic skills must be included in all aspects of the public school curriculum to ensure that all students get these skills. Delivering integrated instruction effectively will require nothing less than a significant reshaping of how our schools and curricula are organized and how our administrative, student services, and teaching personnel approach instruction. School counselors must analyze their role in the delivery of this instruction.

The first challenge facing school counselors as they attempt to assume a co-equal role in developing integrated curriculum is to convince teachers, administrators, parents, and students that the ability to apply knowledge is as important for students as knowledge itself. The second challenge is to convince teachers, administrators, and parents that all students learn better when they are required to use their new knowledge in community, family, and workplace settings. Vocational educators and school counselors represent a bridge to these settings.

Historical differences in the way vocational and academic instruction evolved in our public schools have led to a hierarchical structure in which vocational education is perceived as inferior. It is as if the school system is designed for two types of students — those who will work with their minds and those who will work with their hands. As specialization of knowledge increases, however, all individuals will need to think and work with greater

integrative ability. Combining principles of vocational and academic education allows students to apply knowledge and practice skills necessary for occupational, personal, and educational success.

Organizing our schools, curricula, and personnel to deliver integrated instruction will require planning, commitment, and dedication. School counselor educators have significant opportunities to instill in future school counselors the commitment to (a) implement competency based, comprehensive school counseling and guidance programs and (b) plan quality curriculum options that will prepare students for success in the workplace, school, and home.

How does counselor education get from its current position of delivery of services to its desired position of comprehensive school counseling and guidance? Counselor educators continue to make choices concerning the preparation of counselors to meet the immediate needs of students while trying to progressively move them toward a new system (Carlson, 1989). Attitudes and loyalties can be difficult to change. However, changes suggested in this review are possible, drawing from features central to historical types of school counseling models. As Trotter (1991) suggests, we have much to learn from the comprehensive approach concerning (a) student needs; (b) the career development aspect of vocational guidance; (c) the classroom guidance curriculum; (d) individual student planning; and (e) responsive service functions of the clinical, constellation-of-services approach.

This review of literature deals primarily with the school counselor's role in helping students acquire the basic skills. Based on this review and on visits to nine counselor education programs across the country, the reviewers have identified ten Practical Problems (Hultgren, 1989) that they feel should be addressed by educators. As school counselors are equipped with the skills to: (a) help students plan their coursework and their futures, (b) promote curricula which integrate academic and vocational education, and (c) implement comprehensive counseling and guidance programs, these counselors will be in an optimal position to have a lasting positive effect on students' lifelong success in work, in family life, and in further education.

Practical Problems

The composition of a program's faculty and student body greatly influences the shape of a program, as do available resources, institutional commitments, and state, regional, and national accrediting bodies. Information from the literature review led the reviewers to argue that each program committed to the improvement of school counseling must conduct an analysis of their school counselor education program to determine how these programs address the following:

1. What should be done to help school counselors facilitate the educational and employment transitions of all students (including special populations)?
2. What should be done about school counselors' understanding of the tenets associated with (a) combining academic and vocational education and (b) integrating basic skills into vocational education?
3. What should be done about school counselors' knowledge of the various definitions of basic skills and their impact on curriculum design and content?
4. What should be done to help school counselors identify the basic skills necessary for success in a changing workplace?
5. What should be done about school counselors' knowledge of changing student demographics and the increased needs of youth?
6. What should be done about transforming school counseling programs to comprehensive counseling and guidance programs?
7. What should be done to help school counselors assist all students in developing individual life/career plans?
8. What should be done about school counselors' understanding of school restructuring and school improvement?
9. What should be done to help school counselors influence educational change to better meet the needs of all students?
10. What should be done about keeping school counselors professionally current within the changing structure of public education?

In the opinion of the reviewers, each of these Practical Problems deserves the consideration of school counselor educators. These educators must find the best methods for imparting the knowledge that preservice school counselors need as they enter the counseling profession. If school counselors come to work ready and able to help students develop good planning habits and sound knowledge of the basic skills, they can empower these students to expect success in all their life roles.

REFERENCES

Adelman, C. (1983). Devaluation, Diffusion and the college connection: A study of high school transcripts, 1984-1981. Washington, DC: National Commission on Excellence in Education.

Alaska Office of Adult and Vocational Education. (1988). Alaska school counselors program. Juneau, AK: Alaska Department of Education.

Allen, K., & Gardner, N. (1989). Tender loving counseling: A dropout-prevention program. School Counselor, 36(5), 389-392.

American Association for the Advancement of Science. (1989). Project 2061: Science for all Americans-a report on literacy goals in science, mathematics, and technology. Washington, DC: Author.

American Psychological Association. (1983). Publication manual of the American psychological association (3rd. ed.). Washington, DC: American Psychological Association.

American School Counselor Association. (1984). The school counselor and developmental guidance position statement. Alexandria, VA: Author.

American School Counselor Association. (1988). Cross/multi-cultural counseling position paper. Alexandria, VA: Author.

Anderson, W. W., & Steward, O. J. (1989, March 29). Testing job specific literacy of industrial workers. Cooperation between educators and industry. Paper presented to the American Education Research Associates. (ERIC Document Reproduction Service No. ED 306 360)

Applebee, A. N., Langer, J.A., & Mullis, I.V.S. (1985). The reading report card: Progress toward excellence in our schools. Princeton, N.J., National Assessment of Educational Progress, Educational Testing Service.

Applying the academics: A task for vocational education. (1989, June). Dover, Delaware: Delaware State Department of Public Instruction. (ERIC Document Reproduction Service No. ED 259 143)

Arand, J. U., & Harding, C. G. (1987). An investigation into problem solving in education: A problem-solving curricular framework. Journal of Allied Health, 16(1), 7-17.

Arni, T., & Bancroft, M. (1990). Integrating the guidance curriculum into language arts. Available from Thomas Arni and Michael Bancroft, Rock Bridge High School, Columbia, MO.

Ary, D., Jacobs, L. C., & Razavieh, A. (1990). Introduction to research in education (4th. ed.). Fort Worth, TX: Holt, Rinehart & Winston.

Astin, H. S. (1967). Patterns of career choice over time. Personnel and Guidance Journal, 45, 541-546.

Aubrey, R. (1984). Reform in schooling; Four proposals on an educational quest. Journal of Counseling and Development, 63, 204-213.

Bailey, T., & Novelle, T. (1989, April). The impact of new technology on skills and skill formation in the banking and textile industries. NCEE Brief #1. New York: National Center on Education and Employment. (ERIC Document Reproduction Service No. ED 309 250)

Bailey, W., Deery, N., Gehrke, M., Perry, N., & Whitledge, J. (1989, October). Issues in elementary school counseling: Discussion with American School Counselor Association leaders. Elementary School Guidance and Counseling, 24, 4-13.

Bailey, W., Bruce, T., Rotter, J., & Sampson, J. (1992). Improved career decision making: Integration into counselor education. Counselor Educator and Supervision, 31(3), 146-154.

Baker, S., Swisher, J., Nadenichek, P., & Popowicz, C. (1984). Measured effects of primary prevention strategies. The Personnel and Guidance Journal, 62, 459-464.

Baker, S. (1992). School counseling for the twenty-first century. New York: Merrill Publishing Company.

Balian, E. S. (1982). How to design, analyze, and write doctoral research: The practical guidebook. Baltimore, MD: University Press of America.

Barton, P. E., & Kirsch, I. S. (1990, July). Workplace competencies: The need to improve literacy and employment readiness. Policy Perspectives Series. Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 317 873)

Berlin, G., & Sum. A. (1988, February). Toward a more perfect union: Basic skills, poor families, and our economic future. New York: Ford Foundation. Occasional paper # 3.

Berryman, S. E. (1988, April). Education and the economy: What should we teach? When? How? To whom? New York: National Center on Education and Employment. Occasional paper #4.

Bhaerman, R. (1977). Career education and basic academic achievement: A descriptive analysis of the research. Washington, DC: U.S. Office of Education.

Bishop, J. (1985). Preparing youth for employment. Columbus, OH: National Center for Research in Vocational Education, The Ohio State University. (ERIC Document Reproduction Service No. ED 254 644)

Blai, B. Jr. (1989). Literacy/quality of life in the United States. (ERIC Document Reproduction Service No. ED 302 817)

Bleuer, J. (1989). Counseling underachievers: A counselor's guide to helping students improve their academic performance. Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

Borders, L.D., & Drury, S. (1992). Comprehensive school counseling programs: A review for policymakers and practitioners. Journal of Counseling and Development, 70, 487-498.

Bottoms, G., & Korcheck, S. A. (1989). Achievement of 1988 secondary vocational completers. A report of the 1988 baseline assessment of the SREB-state vocational education consortium using the national assessment of educational progress. Atlanta, GA: Southern Regional Education Board.

Bottoms, J. E. (1989, February). Closing the gap between vocational and academic education. Washington, DC: Policy Studies Associates Inc. (ERIC Document Reproduction Service No. ED 305 516)

Boyer, E. (1983). High school: A report on secondary education in America. New York: Harper & Row Publishers, Inc.

Bruner, J. S. (1963). The process of education. New York: Vintage Books.

Bundy, N., & Boser, J. (1987). Helping latchkey children: A group guidance approach. School Counselor, 35(1), 58-65.

Buskirk, D. (1988, December). A comparative study of industrial arts/technology education competencies between industrial teacher educators and production/plant managers of manufacturing industries. Lincoln, NE: University of Nebraska. (ERIC Document Reproduction Service No. ED 303 635)

Caine, R. N., & Caine, G. (1991). Making connections: Teaching and the human brain. Alexandria, VA: Association for Supervision and Curriculum Development.

Carlivati, P. (1990, May). Workplace literacy: Addressing the problem of basic skills deficiencies. Association Management, 42, 20, 65.

Carlson, R. (1989). School counselors and school organizations: What is the nature of their connection? The School Counselor, 37(1), 7-14.

Carnevale, A. P., Gainer, L. J., & Meltzer, A. S. (1988). Workplace basics: The skills employers want. Alexandria, VA: American Society for Training and Development. (ERIC Document Reproduction Service No. ED 299 462)

Carnevale, A. P., & Gainer, L. J. (1989). The learning enterprise. Alexandria, VA: American Society for Training and Development. (ERIC Document Reproduction Service No. ED 304 581)

Carnevale, A. P., & Johnston, J. W. (1989). Training America: Strategies for the nation. Alexandria, VA: American Society for Training and Development.

Cecil, J. (1990). Interdivisional task force on school counseling. ACES Spectrum, 50(4), 3-4.

Champagne, A. (1986). Teaching for workplace success. Columbus, OH: The National Center for Research in Vocational Education. The Ohio State University. (Occasional Paper No. 113).

Chisman, F. P. (1989, January). Jump start: The federal role in adult literacy. Southport, CT: Southport Institute for Policy Analysis, Inc. (ERIC Document Reproduction Service No. ED 302 675)

Cole, C. (1981). Guidance in the middle school: Everyone's responsibility. Fairborn, OH: National Middle School Association.

Cole, C. (1986, November). The guidance and counseling program: A vital service in the middle school. Schools in the Middle, Washington, DC: National Association of Secondary School Principals.

Cole, C. (1988). The school counselor: Image and impact, counselor role and function, 1960's to 1990's and beyond. In G. Walz (Ed.), Building strong school counseling programs (pp. 127-150). Alexandria, VA: American Association for Counseling and Development.

College Board. (1986). Keeping the options open-Recommendations: Final report of the Commission on Precollege Guidance and Counseling. New York: College Entrance Examination Board.

Commission on Reorganization of Secondary Education. (1918). Cardinal principles of secondary education (Bulletin #35). Washington, DC: U.S. Bureau of Education.

Cook, T. D., & Campbell, D. T. (1979). Quasi-experimentation: Design and analysis issues for field settings. Boston, MA: Houghton-Mifflin.

Cooper, H. M. (1984). The integrative research review. Beverly Hills, CA: Sage Publications.

Council for Accreditation of Counseling and Related Educational Programs. (1988). Accreditation procedures manual and application. Alexandria, VA: Author.

Coy, D., Cole, C., Huey, W., & Sears, S. (1991). (Eds.). Toward the transformation of secondary school counseling. Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

Crismore, A., & Mikulecky, L. (1987, May). Investigating a process model of literacy in the workplace. Paper presented at the Annual Meeting of the International Reading Association. Anaheim, CA. May 3-7.

Deck, M., & Cobia, D. (1992, March). Working papers for ancillary meetings: School counseling project/ACES school counseling network. Paper presented at the American Association for Counseling and Development Convention, Baltimore, MD.

Dees, A. (1990, January/February). Basic skills go high tech. Vocational Education Journal, 65(1), 30-32.

Department of Adult, Vocational and Technical Education, University of Illinois. (1979). Implementing of systematic planning for comprehensive programs of guidance, counseling, placement and follow-through in Illinois, p. 2, (Contract RDI-B9-187). Champaign, Urbana, IL: University of Illinois.

Dorsten, L. E., & Smink, J. (1988). Initiating change in secondary education: Enhancing basic skills acquisition and the school-to-work transition using research based vocational educational resources. Columbus, OH: National Center for Research in Vocational Education, The Ohio State University. (ERIC Document Reproduction Service No. ED 290 024)

Drake, S. M. (1991). How our team dissolved the boundaries. Educational Leadership, 49(2), 20-22.

Drier, H. (1989). Delivering career development outcomes through vocational education. In R. Hansen (Ed.), Career development: Preparing for the 21st century (pp.49-66). Knoxville, TN: University of Tennessee.

Dronka, P. (1988, October). Fusing basic skills with vocational education. Vocational Education Journal, 63(7), 53-56.

Dunn, J. A. (1988, Fall). The future of secondary school vocational education: Curriculum reform or retrenchment-basic academic or technical skills. Journal of Studies in Technical Careers, 10(4), 372-383.

Dunn-Rankin, P., & Beil, D. (1989). Workplace literacy programs: A review of the literature. Honolulu, HI: Hawaiian Educational Council, Inc.

Dyrenfurth, M. J., & Kozak, M. R. (Eds.). (1991). Technological literacy: Council on technology teacher education - 40th yearbook. Glencoe Division, Peoria, Il: Macmillan/McGraw-Hill.

Ettinger, J. (Ed.). (1991). Improved career decision making in a changing world. Garrett Park, MD: Garrett Park Press.

Executive Report of the Jobs for Indiana's Future. (1989, August). West Somerville, MA: Jobs for the Future, Inc. (ERIC Document Reproduction Service No. ED 312 447)

Feldman, M. (1987). The heart of educational reform: Integrating academic and vocational education. In S. A. Korcheck (Ed.), Strengthening the basic competencies of students enrolled in vocational education. Atlanta, GA: Southern Regional Education Board, pp. 5-10.

Feller, R. (1990). Connect with NOICC to improve career development in counselor education, ACES Spectrum, 51(2), 12.

Feller, R., & Daly, J. (1992, February). Counselors tackle the new basics. Vocational Education Journal, 67(2), pp. 24-25, 55.

Felstehausen, G., & Schultz, J. B. (Eds.). (1991). Work and family: Educational implications. Teacher Education Section, American Home Economics Association. Peoria, IL: Glencoe, Macmillan/McGraw Hill.

Fitzgerald, L. F. (1986). Monograph on the essential relations between education and work. Journal of Vocational Behavior, 28, 254-284.

Fogerty, R. (1991). Ten ways to integrate curriculum. Educational Leadership, 49(2), 61-65.

Foodservice, subject matter update. (1986-87). Salem, OR: Oregon State Department of Education, Division of Vocational Education.

Gardner, H. (1983). Frames of mind. New York: Basic Books.

Gardner, H. (1987). Developing the spectrum of human intelligences. Harvard Educational Review, 57, 187-193.

Gazda, G. (1991). What recent survey research indicates for the future of counseling an counselor education. In G. Walz, G. Gazda & B. Shertzer (Eds.), Counseling futures (pp.11-26). Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

George, R. (1986). Youth policies and programs in selected countries. Youth and America's Future. Washington, DC: William T. Grant Foundation Commission on Work, Family and Citizenship.

Gerler, E., Kinney, J., & Anderson. (1985). The effects of counseling on classroom performance: Then and now. The Journal of Humanistic Education and Development, 23, 155-165.

Gerler, E. (1988). Recent research on child abuse: A brief review. Elementary School Guidance and Counseling, 22(4), 325-327.

Glass, G. V., McGraw, B., & Smith, M. L. (1981). Meta-analysis in social research. Beverly Hills, CA: Sage Publications.

Goldsmith, E. B. (Ed.), (1989). Work and family: Theory, research, and applications. Newberry Park, CA: Sage Publications Ltd.

Goodlad, J. (1990, November). Better teachers for our nation's school. Phi Delta Kappan, 72(3), 184-194.

Griggs, S. (1988). The counselor as facilitator of learning. In G. Walz (Ed.). Building strong school counseling programs (pp. 41-46). Alexandria, VA: American Association for Counseling and Development.

Grubb, W. Norton. (Speaker). (1990). Academic/Vocational Integration (Cassette Recording No. H 346). Portland, OR: Northwest Regional Educational Lab.

Gysbers, N., & Henderson, P. (1988). Developing and managing your school guidance program. Alexandria, VA: American Association for Counseling and Development.

Gysbers, N. (1990). Comprehensive guidance programs that work. Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

Gysbers, N., Hughey, K., Starr, M., & Lapan, J. (1992). Improving school guidance program: A framework for program, personnel and results evaluation. Journal of Counseling and Development, 70, 565-570.

Hackney, H. (1990). Counselor preparation for future needs. In H Hackney (Ed.), Changing context for preparation in the 1990's (pp. 77-93). Alexandria, VA: American Association for Counseling and Development.

Hansen, S., & Keirlebar, D. (1978). BORN FREE: A collaborative consultation model for career development and sex-role stereotyping. Personnel and Guidance Journal, 56(7), 395-399.

Hansen, S., Johnson, D., Hatfield, T., Teeson, T., Harper, J., & Perreault, G. (1980). Minneapolis, MN: Project Born Free.

Hansen, S., Pelcak, D., Perreault, G., & Dege, D. (1980). Born free training packet to reduce sex-role stereotyping in career development: Elementary level. Minneapolis, MN: Project Born Free.

Harnisch, D. L., Fisher, A. T., Kacmarek, P. A., DeStefano, L. with assistance from Tu, J. J., & Danielson S. K. (1987). Transition literature review: Educational, employment, and independent living outcomes, Volume I. Urbana-Champaign, IL: Transition Institute at University of Illinois.

Harnisch, D. L., Chaplin, C. C., Fisher, A. T., Tu, J. J., Decker, K. S., & Danielson, S. K. (1987a). Transition literature review: Educational, employment, and independent living outcomes, Volume I. Urbana-Champaign, IL: Transition Institute at University of Illinois.

Harnisch, D. L., & Fisher, A. T. (1988). Transition literature review: Educational, employment, and independent living outcomes, Volume 3. Urbana-Champaign, IL: Transition Institute at University of Illinois.

Hartz, J., Novak, J., & Kosmo, S. (1977). Career education, career guidance, and occupational competence: Revitalizing the preservice preparation of vocational guidance and counseling personnel. Madison, WI: Wisconsin Vocational Studies Center.

Heale, J., Davis, D., Norman, G., Woodward, C., Neufeld, V., & Dodd, P. (1988). A randomized controlled trial assessing the impact of problem-based versus didactic teaching methods in continuing medical education. Program for Continuing Medical Education. Ontario, Canada: McMaster Health Sciences Center.

Herr, E. (1978). Research in career education: The state of the art. Columbus, OH: ERIC Clearinghouse for Career Education.

Herr, E. (1984). The national reports on reform in schooling: Some missing ingredients. Journal of Counseling and Development, 63, 217-220.

Herr, E. (1989). Counseling in a dynamic society. Alexandria, VA: American Association for Counseling and Development.

Herr, E. (1991). Guidance and counseling: A shared responsibility. Alexandria, VA: National Association of College Admission Counselors.

Herr, E., & Cramer, S. (1992). Career guidance and counseling through the lifespan: Systematic approaches. New York, NY: Harper Collins Publishers.

Hohenshil, T. (1987). The educational reform movement: What does it mean for counseling? Journal of Counseling and Development, 66, 57-58.

Hosie, T. (1986). A content analysis of counselor education and supervision: The formative years. Counselor Education and Supervision, 25, 271-283.

Hoyt, K. (1980). Evaluation of K-12 career education: A status report. Washington, DC: Office of Career Education.

Hoyt, K. (1989). Counselors and career development- A topic in educational reform proposals. Bloomington, IN: Meridian Education Corporation.

Hoyt, K. (1990a). A proposal for making transition from schooling to employment an important component of educational reform. Future Choices: Toward a National Youth Policy, 2 (2), 73-86.

Hoyt, K. (1990b). Career development and counselor preparation. In H. Hackney (Ed.), Changing context for counselor preparation (pp. 55-75). Alexandria, VA: American Association for Counseling and Development.

Hull, D., & Parnell, D. (1991). Tech prep associate degree: A win/win experience . Waco, TX: Center for Occupational Research and Development.

Hull, W. L., & Sechler, J. A. (1987). Adult literacy: Skills for the American work force. Research and development series no. 265B. Columbus, OH: National Center for Research in Vocational Education, The Ohio State University. (ERIC Document Reproduction Service No. ED 285 980)

Hultgren, F. (1989). A conceptual guide framework for home economics curriculum in Maryland. College Park, MD: University of Maryland.

Hunter, J. E., Schmidt, F. L., & Jackson, G. B. (1982). Meta-analysis: Cumulating research findings across studies. Beverly Hills, CA: Sage Publications.

Idaho Department of Education. (1988). Idaho comprehensive guidance and counseling program model. Boise, ID: Idaho Department of Education.

Iowa State Department of Education. (1986). The Iowa K-12 career guidance curriculum guide for student development. Des Moines: ISDE, Guidance Services.

Ivey, A., & Goncalves, O. (1987). Toward a developmental counseling curriculum. Counselor Education and Supervision, 26, 270-278.

Ivey, A., & Rigazio-Digilio, S. (1991, January). Toward a developmental practice of mental health counseling: Strategies for training, practice and political unity. Journal of Mental Health Counseling, 13(1), 21-36.

Jurmo, P., Wiggenhorn, B., Packer, A., & Zeigler, W. (1989, January). How can business fight workplace illiteracy. Training and Development Journal, 43, 18-25.

Kennedy, J. J., & Bush, A. J. (1985). An introduction to the design and analysis of experiments in behavioral research. Lantham, MD: University Press of America.

Keogh, L., Lafleur, C., Bray, J., Burns, K., Manuel, P., Maxwell, T., Roberts, J., & Rumble, J. (1989). A review of guidance service: Final report. Simcoe County Board of Education.

Kerlinger, F. N. (1973). Foundations of behavioral research (2nd. ed.). New York: Holt, Rinehart & Winston.

Kliebard, H. M. (1990). Vocational education as symbolic action: Connecting schooling with the workplace. American Educational Research Journal, 27(1), 9-26.

Kline, M., & Cowan, P. A. (1989). Re-thinking the connections among "work" and "family" and well-being: A model for investigating employment and family work contexts. In E.B. Goldsmith (Ed.), Work and family: Theory, research, and applications (pp. 61-90). Newbury Park, CA: Sage Publications, Inc.

Knold, J. A. (Ed.). (1986). Employee training needs as expressed by employers in Washington State. Olympia, WA: Washington State Commission for Vocational Education.

Korcheck, S. A. (Ed.). (1987). Strengthening the basic competencies of students enrolled in vocational education. Atlanta, GA: Southern Regional Educational Board.

Krathwohl, D. R. (1988). How to prepare a research proposal (3rd. ed.). Syracuse, NY: Syracuse University Press.

Lee, C. (1988, April). Basic training in the corporate schoolhouse. Training, 25(4), 27-30, 32, 33-36.

Lee, V., & Ekstrom, R. (1987). Student access to guidance counseling in the high school. American Educational Research Journal, 24, 287-310.

Levi, M., & Ziegler, S. (1991). Making connections: Guidance and career education in the middle years. Toronto, Ontario: MGS Publications Services.

Light, R. J., & Pillemer, D. B. (1984). Summing up: the Science of reviewing research. Cambridge, MA: Harvard University Press.

Lister, R. J. (1985, April). Transition from school to work. (Resource Paper No. 42.) Paper presented at the Annual Convention of the Council for Exceptional Children. Anaheim, CA.

Locke, L. F., Spirduso, W. W., & Silverman, S. J. (1987). Proposals that work: A guide for planning dissertation and grant proposals (2nd. ed.). Newbury Park, CA: Sage Publications.

Long, T. J., Convey, J. J., & Chwalek, A. R. (1985). Completing dissertations in the behavioral sciences and education. San Francisco. CA: Jossey-Bass.

Maccia, E. S. (1965). Curriculum theory and policy (Occasional Paper #65-176). Columbus, OH: The Ohio State University, Educational Theory Center and Social Studies Curriculum Center.

Matthay, E. (1991). Counseling for college: A professional's guide to motivating, advising, and preparing students for higher education. Princeton, NJ: Peterson's Guide.

Meyan, E. (1988, August). Departments of Counseling Psychology with schools of education: Partners in teacher education. Paper presented at the Annual Meeting of the American Psychological association. Atlanta, GA.

Michigan Department of Education. (1987). Policy and position paper on comprehensive guidance and counseling programs. Lansing, MI: Michigan Department of Education.

Miguel, R. J. (Ed.). (1985, May). Education and employment: Where we are and where we ought to go. Annual policy forum proceedings. Columbus, OH: The Ohio State University, National Center for Research in Vocational Education.

Mikulecky, L. J. (1982). Functional writing in the workplace. In L. Gentry (Ed.), Research and Instructional Practical Writings. Los Alamitos, CA. South West Regional Laboratories.

Mikulecky, L. J., & Ehlinger, J. (1986). The influence of metacognitive aspects of literacy on job performance in electronics technicians. Journal of Reading Behavior, 18(1), 41-50.

Miller, G. (1988). Counselor functions in excellent schools: Elementary through secondary. School Counselor, 36(2), 88-93.

Miller, A. (1991). Using counselor handbooks and student guides to promote TPAD and counsel effectively. In D. Hull & D. Parnell (Eds.), Tech prep associate degree: A win/win experience (pp. 260). Waco, TX: Center for Occupational Research and Development.

Missouri Department of Education. (1988). Missouri comprehensive guidance: A model for program development, implementation, and evaluation. Columbia, MO: Instructional Materials Laboratory, University of Missouri.

Moles, O. (1991). Guidance programs in American high schools: A descriptive portrait. School Counselor, 38, 163-177.

Mote, L. L., Morton, J. H., & Marshall, C. (1986, October). Career training: Strategies for training disadvantaged rural youth. Paper presented at the annual conference of the National Rural and Small School Consortium, Bellingham, WA.

Myrick, R. (1987). Developmental guidance and counseling: A practical approach. Minneapolis, MN: Educational Media Corporation.

National Association of College Admissions Counselors. (1986). Frontiers of Possibilities. Washington, DC: Author.

National Commission on Children. (1991). Beyond rhetoric: A new american agenda for children and families. Washington, DC: Author.

National Commission on Excellence in Education. (1983). A nation at risk: The imperative for educational reform. Washington, DC: Government Printing Office.

National Commission on Secondary Vocational Education. (1984). Unfinished Agenda. Columbus, OH: Ohio State University, National Center for Research in Vocational Education.

National Education Association. (1894). Report of the committee of ten on secondary school studies. New York: American Book Co.

National Occupational Information Coordinating Committee (1989). National development guidelines: Local handbook for high schools. Washington, DC: NOICC.

National Occupational Information Coordinating Committee. (1991). The national career development guidelines: Progress and possibilities. Washington, DC: Author.

National Research Council. (1989). Everybody counts: A report to the nation on the future of mathematics education. National Academy Press, Washington, D.C.

National Student Aid Coalition. (1985). Closing the information gap: Ways to improve student awareness of financial aid opportunities. Washington, DC: Author.

Natriello, G. (1989). What do employers want in entry-level workers? An assessment of the evidence. Trends and Issues #12. New York: National Center on Education and Employment, Columbia University. (ERIC Document Reproduction Service No. ED 308279).

Nebraska Department of Education. (1991). Nebraska school counseling program guide. Lincoln, NE: Nebraska Department of Education.

Nevada Department of Education. (1991). Nevada career and occupational guidance and counseling course of study. Carson City, NV:Nevada Department of Education.

Newble, D. I., & Clarke, R. M. (1986). The approaches to learning of students in a traditional and in an innovative problem-based medical school. Medical Education, 20, 267-273.

New Hampshire State Department of Education. (1988). New Hampshire comprehensive guidance and counseling program. Concord, NH: New Hampshire State Department of Education.

Norman, G. R. (1988). Problem-solving skills, solving problems and problem-based learning. Medical Education, 22, 279-286.

Oakes, J. (1983). Limiting opportunities: Student race and curricular differences in secondary vocational education. American Journal of Education. 91(3), 328-355.

O'Bryant, B. (1991, April). Getting the most from your school counseling program. National Association of Secondary School Principals Bulletin, 75(534), 1-4.

Ohio Department of Education. (1991). Meeting tomorrow's challenge: A message to Ohio's counseling professionals. ODE, Columbus, OH.

Omizo, M., & Hersberger, J. (1988). Teaching children to cope with anger. Elementary School Guidance and Counseling, 22(3), 241-245.

Owens, T. (1988, April). Improving the collaboration of secondary vocational and academic educators. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.

Owens, T., Lindner, F., & Cohen, C. (1988). Entry-level worker study: Phase 1 report. The program report. Portland, OR: Northwest Regional Educational Lab. (ERIC Document Reproduction Service No. ED 313500)

Owens, T., & McClure, L. (1989, August). New development in improving the integration of academic and vocational education. Program Report, Portland, OR: Northwest Regional Educational Lab.

Patterson, C. (1984). Junior high stop smoking groups. School Counselor, 31(5), 480-481.

Patterson, J. (1985, December). Career development: Revolution, reform and renaissance. Journal of Career Development, 12(2), 129-144.

Peer, G. (1985). The status of secondary school guidance: A national survey. The School Counselor, 32, 181-189.

Phillips-Jones, L., Jones, G.B., & Drier, H. (1981). Developing training competencies for career guidance personnel. Falls Church, VA: National Vocational Guidance Association.

Plihal, J. (1989). Using a critical inquiry perspective to study critical thinking in home economics. Journal of Vocational Home Economics Education, 7(1), 36-47.

Plihal, J., Johnson, M. A., Bentley, C., Morgaine, C., & Liang, T. (1990). Integration of vocational and academic education: Theory and practice. Berkeley, CA: University of California, National Center for Research in Vocational Education.

Ponzo, Z. (1989). Breaking free: Unlocking the chains that bind us. School Counselor, 37, 67-72.

Powell, A., Farar, F., & Cohen, D. (1985). The shopping mall high school. Boston: Houghton Mifflin.

Pritz, S. G. (1988, March). Basic skills: The new imperatives. Vocational Education Journal, 63(2), 24-26.

Pucel, D. J., Devogel, S. H., & Persico, J. (1988, February). Visions for change: The context and characteristics of postsecondary vocational education curriculum in the year 2000: Implication for policy. St. Paul, MN: Minnesota Research and Development Center for Vocational Education, Department of Vocational and Technical Education, University of Minnesota.

Santos-Gomez, L., Kalishman, S., Rezler, A., Skipper, B., & Mennin, S. P. (1990). Residency performance of graduates from a problem-based and a conventional curriculum. Medical Education, 24, 366-375.

Schmidt, H. G., Dauphinee, W. D., & Patel, V. L. (1991, April). Comparing the effects of problem-based and conventional curricula in an international sample. Journal of Medical Education, 62, 305-315.

Secretary's Commission on Achieving Necessary Skills (SCANS). (1991). What work requires of schools: a scans report for America 2000. Washington, DC: U.S. Department of Labor.

Selvin, M., Oakes, J., Hare, S., Ramsey, K., & Schoeff, D. (1990). Who gets what and why: Curricular decisionmaking at three comprehensive high schools. Santa Monica, CA: RAND Corporation.

Semple, N. (1987). Investing in our children: Business and the public schools. In Korcheck, S. A. (Ed.). Strengthening the basic competencies of students enrolled in vocational education Atlanta, GA: Southern Regional Educational Board, (pp. 11-15).

Shahabudin, S. H. (1987). Content coverage in problem-based learning. Medical Education, 21, 310-313.

Shaw, M., & Goodyear, R. (1984). Prologue to primary prevention in schools. The Personnel and Guidance Journal, 62, 446-447.

Shertzer, B. (1991). The evolution of counseling. In G. Walz, G. Gazda & B. Shertzer (Eds.), Counseling Futures (pp.27-37). Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

Simon, J. L. (1978). Basic research methods in social science (2nd. ed.). New York: Random House.

Slavin, R. E. (1986). Best evidence synthesis: An alternative to meta-analytic and traditional reviews. Educational Researcher, 15(9), 5-11.

South Carolina State Council on Vocational and Technical Education. (1986). What employers say about vocational education in South Carolina. A study of vocational education: Report #5. Columbia, SC: Author. (ERIC Document Reproduction Service No. ED 290923).

Splete, H., & Stewart, A. (1990). Competency-based career development strategies and the National Career Development Guidelines. Information Series No. 345. Columbus, OH: ERIC Clearinghouse on Adult, Career and Vocational Education.

Sticht, T. G. (1986). Cognitive science and human resources management. Advances in Reading/Language Research, 4, 3-15.

Stone, L. (1985). School counselor preparation curriculum: How much is enough. Paper presented at the annual meeting of the North Central Association for Counselor Education and Supervision, Chicago, IL.

Strumpf, L. (1986). Basic skills and employment and training programs. (Monograph for local elected officials and private industry council members.) Washington, DC: Center for Remediation Design.

Sweeney, T. (1988). Building strong school counseling programs: Implications for counselor preparation. In G. Walz (Ed.), Building strong school counseling programs (pp. 155-168). Alexandria, VA: American Association for Counseling and Development.

Ten Recommendations for improving secondary vocational education. (1985). Atlanta, GA: Southern Regional Educational Board. (ERIC Document Reproduction Service No. ED 257 968)

Thompson, R. (1992). School counselling renewal: Strategies for the twenty-first century. Muncie, IN: Accelerated Development, Inc.

Trebilco, G. (1984). Career education and career maturity. Journal of Vocational Behavior, 25, 191-202.

Trotter, T. (1991). Walking the talk: Developing a local comprehensive school counseling program. Alexandria, VA: American School Counselor Association.

United States Government Accounting Office. (1990). Training strategies: Preparing noncollege youth for employment in the U.S. and foreign countries. Washington, DC: Author.

Wade, B. K., & Williams, W. (1988, April). Interpreting vocationalism as applied academics. Paper presented to the Annual Meeting of the American Educational Research Association, New Orleans, LA. (ERIC Document Reproduction Service No. ED 296 132)

Wakelee-Lynch, J. (1990). Alaska school counselors develop model for counseling programs. Guidepost, 30(10), 24.

Walz, G., & Benjamin, L. (1983). Shaping counselor education programs in the next five years: An experimental prototype for the counselor of tomorrow.

Walz, G., & Bleuer, J. (1991). A kick in the curriculum for counselor education. Ann Arbor, MI: ERIC Counseling and Personnel Services Clearinghouse.

Way, W. L. (1991). Frameworks for examining work-family relationships within the context of home economics education. In G. Felstehausen & J.B. Schultz (Eds.), Work and family: Educational implications. Teacher Education Section, American Home Economics Association, Peoria, Il. Glencoe, Macmillan/McGraw-Hill.

Welter, T. R. (1989, Jan 16). Readin' and writin' and... Industry Week, 238(2), 33-34.

Wiersma, W. W. (1991). Research methods in education (5th. ed.). Boston, MA: Allyn & Bacon.

William T. Grant Foundation Commission on work, family, and citizenship. (1988). The forgotten half: non-college youth in America. An interim report on the school-to-work transition. Washington, DC: Author.

Wilson, N. (1986). Counselor interventions with low-achieving and underachieving elementary, middle and high school student: A review of the literature. Journal of Counseling and Development, 64, 628-634.

Zuga, K. F., & Lindstrom M. R. (1989, July). A tentative framework of general work knowledge skills and attitudes for secondary vocational education. St. Paul, MN: Research and Development Center for Vocational Education, University of Minnesota.

Zunker, V. (1987, December). The life-style and career development standard. Counselor Education and Supervision, 27, 110-117.